Washington State Department of Health Regional Emergency Medical Services and Trauma Care Plan

FY 02-03 BIENNIAL PLAN: WEST REGION

EMTP Mission

To establish, promote and maintain a system of effective emergency medical and trauma care services. Such a system provides timely and appropriate delivery of emergency medical treatment for people with acute illness and traumatic injury, and recognizes the changing methods and environment for providing optimal emergency care throughout the state of Washington.

INTRODUCTION

A. Summary of proposed changes within this Regional Plan which require specific Department approval: *(one page maximum)* Specify all requested changes contained within this Plan in the following areas: (1) recommended numbers of Department-approved verified prehospital services within the region; (2) recommended numbers and/or levels of Department-designed trauma services and/or rehabilitation services within the region; (3) current Department-approved regional Patient Care Procedures and/or County Operating Procedure appendices to current Department-approved regional Patient Care Procedures; (4) request(s) for Department approval of regional council-adopted higher-than-state minimum standard(s), for implementation within the region.

1. Recommended numbers of Department-approved verified prehospital services within the region:

Minimum and maximum numbers of prehospital verified services include changes for Grays Harbor, N. Pacific and Thurston Counties. No changes for Lewis and Pierce Counties. See Table B for each county for details.

COUNTY & SERVICES	CURRENT Number Verified	MINIMUM NUMBER Approved	MINIMUM NUMBER Recommended	MAXIMUM NUMBER Approved	MAXIMUM NUMBER Recommended
GRAYS HARBOR					
Aid -BLS	11	9	9	12	14
Aid - ILS	0	0	3	0	4
NORTH PACIFIC					
Aid – ILS	0	0	2	0	4
Amb – ILS	0	0	0	0	1
THURSTON					
Amb – ILS	0	0	0	0	1
Amb – ALS	5	5	1	5	4

2. Recommended numbers and/or levels of Department-designated trauma services and/or rehabilitation services within the region:

No changes. See Table C.

3. Current Department-approved regional Patient Care Procedures and/or County Operating Procedure appendices to current Department-approved regional Patient Care Procedures:

Changes to the West Region EMS and Trauma Care System Operational Guidelines, June 2001, are technical updates.

PCP #9: Hospital Resource – Rehabilitation (page 14)
RESOURCES/REFERENCES:
Heath Rehabilitation Center at Good Samaritan Hospital is now called: Good Samaritan Physical Medicine and Rehabilitation, Puyallup

Appendix C: County and Designated Trauma Facility Divert Policies
All designated trauma services in the West Region were contacted and asked to verify their current divert policy for trauma patients to be appended to the regional PCPs. The notation "WREMS Review: June 2001" can be found on the last page of each policy.

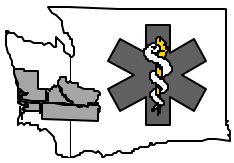
Appendix D: Listing of Washington State Designated Trauma Care Services
St. Clare Hospital, Lakewood was added to the West Region listing as a Level IV (page D-4).

Appendix E: Dispatch Center Criteria
Pierce County: Change FIRECOMM contact to Laura Worley, Acting Director

Appendix F: County Operating Procedures
Pierce County EMS Office was contacted and asked to verify current documents being used in Pierce County to be appended to the regional PCPs:
- Pierce Prehospital Trauma Triage (Destination) Procedures: June 6, 2000
- Catchment Area and Triage Modifiers for Pierce County Trauma Facilities: May 18, 2000

4. **Request(s) for Department approval of regional council-adopted higher-than-state minimum standard(s), for implementation within the region:**
Not applicable

B. Executive Summary*: (two pages maximum)*



The West Region Emergency Medical Services (EMS) and Trauma Care Council, Inc. performs a vital function in the coordination, planning and delivery of emergency medical and trauma prevention services for the state of Washington and its citizens. The Council members are a group of volunteers committed to a system-wide approach to effective and efficient delivery of EMS and trauma care services. Trauma kills more Americans between the ages of one and thirty-four than all illnesses combined. It is the leading cause of death for all people under age forty-four, and the leading cause of disability under age sixty-five. Nearly all of these injuries and deaths are considered avoidable and preventable.

VISION STATEMENT

We envision a tenable regional EMS and Trauma System with a plan that:
- *Keeps patient care and interest the number one priority*
- *Recognizes the value of prevention and public education to decrease trauma-related morbidity and mortality*
- *Preserves local integrity and authority in coordination with inter/intra-regional agreements*

This two-year plan represents the efforts of the Council to design a model EMS and trauma care system for the West Region. A fully functional trauma system addresses education, prevention, rapid communications, prehospital care, in-patient trauma care, rehabilitation, a trauma registry and a quality assurance/improvement program.

The Council assists DOH in addressing four fundamental questions:

1. What are the causes of trauma identified by communities within the West Region?
2. Is trauma care readily available in the region?
3. Is the system efficient and effective?
4. What is needed to implement and/or improve the system?

West Region is a major population, manufacturing, transportation/shipping corridor and tourist center of the state (second only in these areas to the single-county Central Region). It has the additional challenge of its jurisdictional composition, a five-county area including Grays Harbor, Lewis, N. Pacific, Pierce and Thurston. The larger geography spreads population density/centers and increases the challenge for EMS response and treatment services in an area of over 7,000 square miles.

The West Region continues to grow at a rapid rate, ever challenging the regional EMS and trauma care system to provide service. These service challenges continue to stress the regional resources for response, treatment and subsequently financial capacity. Increasing public demands for rapid, quality services are in contrast to increasingly elusive resources to support public health and safety. The stresses of population growth (regional population growth averaged 3.4 % over previous year), business growth (regional growth in manufacturing from position 4 to position 2 in the state) and licensed drivers/automobiles/traffic (regional licensed driver growth 5% over previous year) will continue to challenge health care providers and public safety personnel in local, regional, state and national settings.

The West Region Trauma System Plan seeks to create a model system that effectively treats and rehabilitates trauma victims, and increases injury prevention. The mission is to reduce human suffering and costs associated with morbidity and mortality. This is accomplished through providing assistance and guidance to local providers in the coordination and improvement of EMS and trauma care services. To guarantee all citizens and visitors appropriate and timely trauma and EMS care, the West Region will focus efforts toward medical and prevention education and training of EMS and trauma personnel, trauma level designations of hospitals, trauma verification of prehospital agencies, data collection and regional quality improvement.

Major Council goals for the upcoming two years are described below. These goals do not replace other important work being done through the state emergency medical and trauma prevention system. However, they highlight areas where significant progress, accomplishments and opportunities demand the Council's attention and involvement.

Trauma Plan Improvement. The 02-03 trauma plan has been improved in the following ways: 1) increased participation by Council members and staff in providing plan content and writing the document; 2) more clearly defined goals, objectives and strategies; and 3) more comprehensive information about dispatch centers in the West Region.

Trauma Designation. Tacoma Trauma Service is now operating as a Level II joint designation. The inclusion of Level IV designations in urban as well as rural areas has resulted in the designations of Capital Medical Center and St. Clare Hospital. The Council supports ongoing regional evaluation of trauma center needs and resources. Educational and coordination needs of the designated facilities will be supported within the limits of Council resources.

EMS Conference. The West Region EMS Conference is a major continuing EMS and Trauma education opportunity in the state. The Council will again hold its annual Conference in the first quarter of 2002. Speakers and workshops will cover education/training for BLS, ALS, instructors and injury prevention. A full-day track for ALS/RN/MDs will be offered as well.

State Trauma Registry. The Council has recognized a continuing need for improvements in the coordination of the EMS and trauma data collection system. The Council has, and will continue to have, members active in the role of improving the efficiency and use of this system for the state and in the region. The Council recognizes the importance of this statewide effort and will sponsor Collector training for hospital and prehospital data sources in the West Region.

Quality Improvement Forum. The regional Council and staff will continue to provide administrative support and participation in the West Region Quality Improvement (QI) Forum. Under the leadership of designated trauma services, the QI Forum performs confidential, critical review of EMS and trauma care throughout the regional system.

Injury Prevention and Public Education. The regional Council and staff are committed to injury prevention and public education activities. The Council will continue to support the educational and coordination needs of local providers and coalitions that actively participate in grassroots injury prevention efforts. The Council strives to serve as a well-informed, valued information source about the EMS/trauma system for a variety of audiences, including public citizens, government officials, media and health care providers.

Provider Education and Training. The Council supports Ongoing Training and Evaluation Program (OTEP) and continuing medical education (CME) for prehospital providers, as well as trauma courses for nurses and physicians. The goal is to insure the provision of up-to-date trauma education/training and skills maintenance through courses that are community-based (onsite or centrally located).

The West Region Council will continue with its current leadership structure of Executive Board, Committee Chairs and regional office support staff (sans Administrator). Financial resources have been reallocated to provide regional services at lower administrative cost. This is especially necessary in light of the static level of legislative fund allocations. Our commitment remains to provide focused, goal-driven services that optimize regional coordination, planning and delivery of EMS and trauma care services.

The Council's biennial budget of $426,608 in public funds from the state is used to help coordinate in the neighborhood of 3000 prehospital providers, 90 prehospital agencies and 14 health care facilities in the provision of services to EMS and trauma patients in a total population of over 1 million potential patients throughout the West Region. The Council continuously strives to optimize the coordination and subsequent effectiveness of communities and institutions that provide medical and emergency medical services, groups that often represent discrete and independent jurisdictions. We assert the Council's regional role is an efficient, effective and necessary use of public funds.

ADMINISTRATIVE COMPONENTS

I. REGIONAL COUNCIL

A. Leadership: Describe ***only if there are changes*** in the Regional Council's roles and responsibilities, including a "graphic representation" (organizational chart) of the relationship and interrelationships between the Regional Council as lead agency and other organizations within the region which are involved in providing information and/or services relating to the successful implementation and operation of the regional EMS and trauma care system. Include involvement with professional and consumer groups, relationships with local, state, and federal government agencies, and involvement with other non-profit and private sector groups and organizations within the region.

The West Region is empowered by legislative authority (RCW 70.168.010-70.168.900) and Department of Health Administrative Code (WAC 246.976) to plan, develop, and administer the EMS and trauma care system in the five counties that make up the Region. It is one of eight regional councils statewide composed of local providers and consumer representatives, funded primarily by the Washington State Department of Health (DOH).

Three primary ways that the West Region partners with other agencies are: 1) serving as an information link among local providers, county EMS councils, and state government; 2) providing venues for discussion of issues related to the entire continuum of trauma care and prevention; and 3) providing funding for trauma and prevention related training. Ongoing communication is maintained with:

- designated and non-designated trauma and trauma rehabilitation facilities
- individual prehospital agencies (public and private)
- county EMS councils, Medical Program Directors, public health departments, emergency management departments, 9-1-1 dispatch centers, DUI/traffic safety task forces and SAFE KIDS coalitions
- regional EMS and Trauma Care Councils; EMS and Trauma Steering Committee and its Technical Advisory Committees

Key partners in Washington State government include the Office of Emergency Medical and Trauma Prevention, Traffic Safety Commission and Office of Injury Prevention and Safety Programs.

B. Council Operations: If there are any difficulties with the current internal operations of the Regional Council, describe what changes will be made and discuss how those operations relate to the statutory responsibilities of the Council. Discuss the board (regional council) and committee structure, and how these relate to internal operations in regard to fulfilling the Regional Council's contractual obligations.

Council members fill positions representing local providers and consumers from areas as metropolitan as Tacoma and as remote as the rain forest on the Olympic Peninsula. The process for selecting representatives is determined by each local county EMS council. Council positions are listed below.

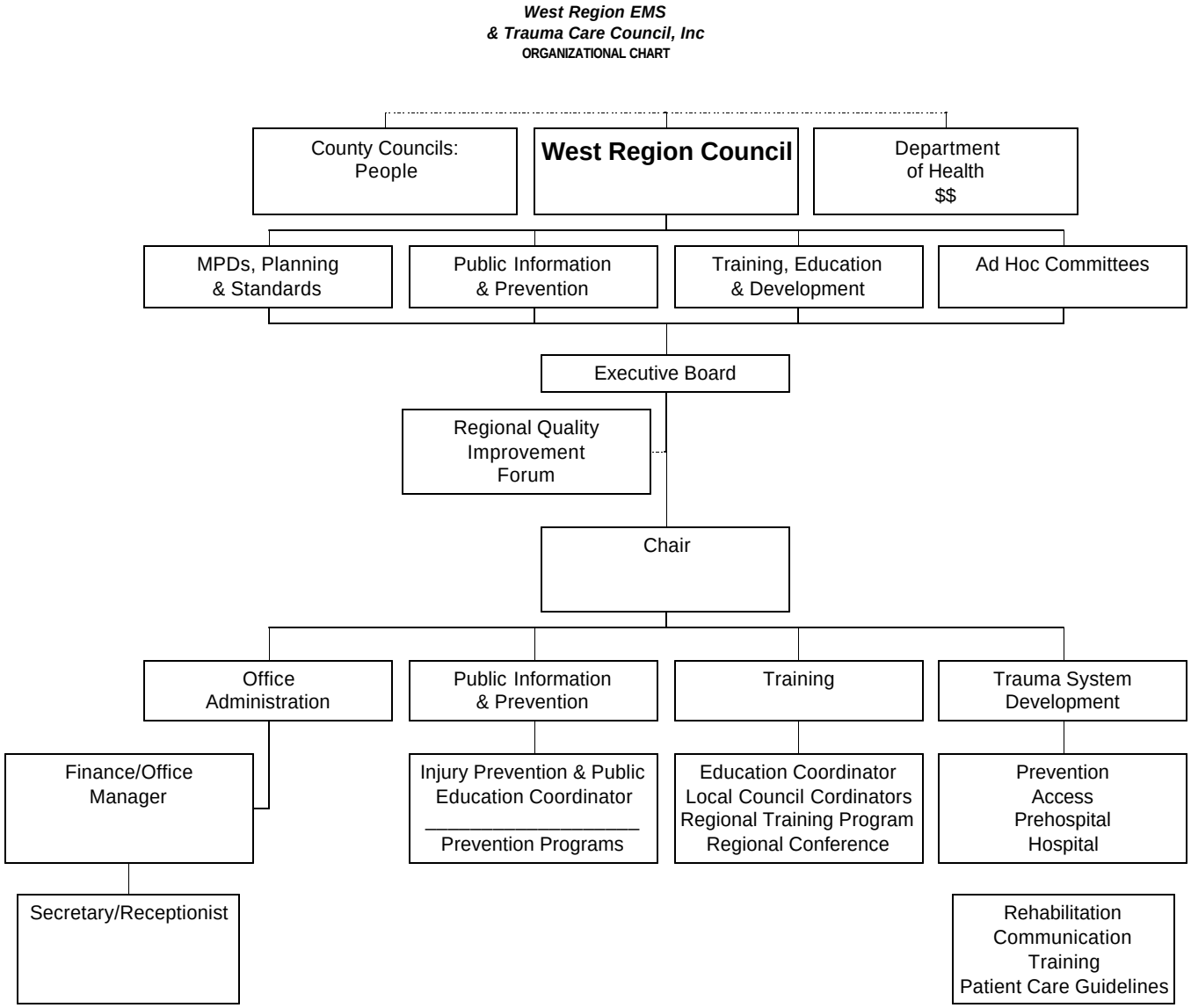
Council Position	**Total # of Positions**
Hospital: Pierce (3), Thurston (1), Lewis (1) Grays Harbor (1)	6
Prehospital: Pierce (2), Thurston (2), Lewis (1), Grays Harbor (1), Private Ambulance (1)	7
Emergency Physician	1
Surgeon	2*
Emergency Room Nurse	2*
Prevention Specialist	1
Trauma Coordinator	1
Local Elected Official: Fire Commissioner & At-Large	2*
Consumer	4**
Law Enforcement: At-Large	2*
Local Government Agency	4**
Local EMS Council	4**
Military PreHospital/Hospital	1
North Pacific County	1
Fire Chiefs	4**
EMS Educating Agencies	2*
County Medical Program Directors	4**
Rehabilitation Specialist	1
Pediatrician	1
Council Total	**50**

*No two being from the same county.

**One from each county. Grays Harbor and N. Pacific are counted as one county.

Comprehensive planning and service are accomplished through a committee structure with final approval by the Council. Council bylaws provide for an eight-member executive board and four standing committees. *Ad hoc* committees are created to address specific issues. The Executive Board is composed of three officers (no two being from the same county) and at least one member-at-large from each county (and two from the county without an elected officer representative). The four standing committees are Injury Prevention and Public Education; Training, Education and Development; Planning; and Standards. In addition, the Council provides administrative support and works closely with the Quality Improvement Forum and the Emergency Nursing Education Cooperation.

TABLE 1: West Region Organizational Chart



Medical Program Directors (MPDs) provide valuable medical review that affects the whole spectrum of Council activities. Major responsibilities of these working groups are summarized on page 8.

Administrative support for Council operations is provided through two full-time staff (2 FTEs) that collectively fill the roles of Office/Finance Manager, Secretary/Receptionist, Injury Prevention/Public Education Coordinator and Regional Education Coordinator. Refer to Appendix Three for a list of current Council members and staff.

II. SYSTEM DEVELOPMENT:

A. EMS/Trauma System Plan Development, Maintenance and Evaluation:

Provide a short statement of how the Region:

1. Conducts needs assessments and identifies resources.

Various methods of needs assessment are used by the Council. Depending on this issue, a written survey may be sent to the county EMS office or to individual providers that would be affected by a decision. Results are summarized and discussed in standing committees. Some decisions are made by consensus and others through a formal vote. Prehospital planning often depends on input from the prehospital Council representatives and the county EMS councils. Hospital education is accomplished through at least one annual regional meeting at which the hospital education coordinators select courses and set up a schedule. All courses utilize written evaluations by students. We also solicit a written evaluation from speakers and vendors at the annual conference.

Available local and state data resources are utilized—principally the State Trauma Registry, Comprehensive Hospital Abstract Reporting System (CHARS), coroner and death certificate reports, run data from local providers and data from county EMS councils. Data reports using specific filters and focused case reviews are conducted at five quality improvement meetings each year, in a confidential setting. Prehospital training topics are sometime recommended by the Forum, based on areas of need highlighted by a type of call or geographic setting. Members report back on issues that need follow-up at subsequent meetings. Other local, state and national data sources are accessed whenever applicable and available.

2. Develops their EMS and trauma plan.

The Executive Board and Committee Chairs lead regional plan development. The Council includes members from across the continuum of care: prevention, prehospital response, hospital/trauma centers and rehabilitation. In addition we have consumer, local EMS council, and law enforcement members. At the annual strategic planning retreat, goals are determined and responsibility for overseeing their achievement is assigned to the appropriate committee. An internal line-item budget is developed that reflects those priorities. Since the deliverables in the contract with the Department of Health address major components of the EMS/trauma system, discussion and reporting on these major goals and objectives keeps the committees focused and on track with a thorough overview of the system each year. The West Region Quality Improvement Forum membership and case review content represents the full continuum of care as well.

Prevention and public education: A regional committee includes representation from active injury prevention coalitions in each county, some of the designated hospitals and local fire departments, and other individuals interested in prevention and public education. This committee reviews injury data for deaths and hospitalizations in the region and each county. Mechanism of injury is evaluated in relation to count, incidence, and age. This data and program evaluations are used to make decisions on prevention projects that receive regional funding.

Prehospital response: West Region encourages each county to maintain a local EMS council that actively reviews prehospital response times, geography, topography and population density. Based on this, the local council recommends minimum and maximum numbers of verified prehospital services to the Council. In addition, case reviews and data presentations at the West Region QI Forum may point out system strengths and weaknesses that prehospital representatives report back to the appropriate local level. Strong prehospital participation on the Council and its committees influences provider training on the regional and local levels. It also directly affects the training content of the annual EMS conference.

Hospital/trauma centers: The West Region Council and the Quality Improvement Forum have active participation from most hospitals in the region The Forum promotes dialogue among hospital and prehospital providers about triage and transport issues on a systems level. The Forum also makes recommendations to the Council regarding trauma training/education issues, medical protocol, regional patient care procedures and legislative issues.

Rehabilitation: The four designated rehabilitation facilities present case reviews and data regularly to the West Region QI Forum. Funding is available to assist with regional trauma rehabilitation training.

3. Implements the approved regional plan.

Broad goals for each committee and the Council at large are determined at the annual strategic planning retreat. All committee products are subject to the review and approval of the West Region Council. Implementation of prehospital planning is accomplished through contracts with the county EMS councils/agencies in compliance with the regional guidelines for minimum standards of care developed with the assistance and approval of the county MPDs. Plans for definitive care are implemented through those hospitals interested in trauma or trauma rehabilitation designation. All committees encourage local provider comments and participation in regional council activities of interest.

Strengthening leadership skills and participation of committee members is crucial since the administrative structure of the Council apportions leadership tasks to the working committees and supporting office staff. The committees all have mission statements. Each committee's major roles and responsibilities are summarized below.

Injury Prevention and Public Education: Promotion of prevention programs primarily through directing regional funds through an injury prevention coalition in each county. Prevention workshop at the annual EMS conference. Public relations materials and activities to educate varied audiences such as EMS and trauma care providers, the public, government officials and media.

Training, Education and Development Committee: Promotion of onsite prehospital basic certification, continuing medical education, trauma care instruction, instructor training—primarily through directing regional funds through the county EMS council or a designated training agency. Onsite or centrally located nurse and physician trauma training and instructor training, especially to meet designation and verification requirements. Coordination of annual regional EMS conference.

Planning & Standards Committees (Joint Committee): Development and implementation of a regional trauma system plan, patient care procedures and the general operating procedures for the Council.

Medical Review: Medical Program Director (MPD) from each county serves on the Council, the Planning or Standards Committees and the West Region Quality Improvement Forum. Provide medical input on patient care procedures, clinical training needs and certification and licensing issues.

Emergency Nursing Education Cooperative: Under the leadership of cooperative member hospitals with administrative support provided by the Council. Member hospitals share resources to provide accredited emergency nursing education courses.

Quality Improvement Forum: Under the leadership of designated trauma service facilities with administrative support provided by the Council. Performs confidential trauma case study, education and data analysis. Mission is to optimize the quality of care and outcome for all EMS and trauma patients in the West Region, which includes preventing injury and reducing injury severity and deaths.

4. **Reviews and evaluates how the plan is working.**
   Annual review and evaluation of the regional Trauma Plan is part of the Council's contractual agreement with DOH. The review process includes program review within the appropriate committees as well as by the full Council. An annual financial review is conducted by an independent Certified Public Accountant. The West Region QI Forum recommends issues to the Council for discussion, evaluation, provider training/education or other appropriate action. The QI Forum plays a key role in quality assurance as specified in the regional Patient Care Procedures (Appendix One).

B. Local government ordinances: Discuss any ***new*** local ordinances that may apply to the operation of local EMS/TC systems within the region. Discuss how these ordinances affect the future operation of local systems and their relationship to the regional EMS and trauma care system.

Local EMS and trauma care councils are established in WAC 246-976-970. Accountability to city, county and state governments varies and can affect the direction and extent of local EMS council activities. State law regulates the amount and frequency of EMS levies available to fund emergency services. Additional county and city regulations may define funding sources such as impact fees, transit authority tax and fees for service. A limited number of grants or donations from other public and private sources have also been available.

The local councils keep the West Region informed about new resolutions or ordinances. Currently, there are no new local ordinances to report. In late 1999, Thurston County Medic One, Tacoma Fire Department and Pierce County Fire District 3 passed permanent EMS levies. The short- and long-term effects of these levies on stability and levels of funding are being followed with interest.

Council members and individual providers will continue to participate in numerous educational forums with their state legislators and other government officials. They meet with their legislators to discuss issues relevant to the EMS and trauma system during the EMS and Trauma Legislative Day held at the State Capitol in Olympia. A resource book about the Region is prepared for distribution to legislators and other interested parties. A regional fax tree updates council members with Legislative Alerts during the session and throughout the year.

C. Local System Development Costs: Specify components of local system development and project costs of implementation, including potential source(s) of funding for those local costs.

The regional funding of an EMS and trauma prevention system helps providers deliver quality trauma care and prevent/reduce the occurrence of trauma in our communities. The dollar figures summarized in Table 2 only partially represent the whole spectrum of economic, personal, and social costs associated with treating or preventing traumatic injuries. The West Region EMS Council budget comprises less than 1 percent of the $77.3 million revenue accounted here. County levies are 47 percent. In-kind services are 52 percent of the total, which attests to the devotion and significant contribution made through volunteer time and resources. In addition, the majority of the West Region's outside funds are registration fees paid by individual providers and agencies to attend the regional EMS Conference that is largely staffed through volunteer hours of Council members.

TABLE 2: Summary of Estimated System & Local Implementation Costs in the West Region, FY02-03

Source of Funds	Revenue	Trauma Service Funds	In-Kind	Total
West Region EMS Council	$ 606,608	-0-	$ 11,104	$ 617,712
West Region QI Forum	-0-	-0-	8,000	8,000
County EMS levies	35,804,520	-0-	-0-	35,804,520
Verified Prehospital	-0-	220,800	40,300,000	40,520,800
Designated Hospitals	-0-	289,048	-0-	289,048
Designated Rehab	-0-	86,000	-0-	86,000
Estimated Totals	**$ 36,411,128**	**$ 595,848**	**$ 40,319,104**	**$ 77,326,080**

Grays Harbor/N. Pacific and Thurston operate local EMS council offices. The Pierce County EMS office has limited staff support through the county's Department of Emergency Management. Lewis County does not have a local EMS council and is currently coordinating countywide activities through the collaboration of the Medical Program Director, the community college; the Level IV designated trauma service and local fire/EMS districts. Refer to Appendix Three for a list of county EMS council contacts. Staffing levels and budgetary support for local EMS council administration, coordination and delivery of community-based prehospital training, and the Medical Program Director varies among West Region counties. Communications and dispatch both play critical roles in local development, however, these components are only partially under the authority of the EMS/trauma system. Partnerships, funding and equipment needs and resources vary from county to county. The Council continues to explore and discuss its appropriate regional responsibilities and role in local system development, with an emphasis on preserving local integrity and authority in coordination with inter/intra-regional agreements.

EMS levies of $35.8 million are estimated collectible for 2002-03 in the West Region. Local tax options help support prehospital response, training and quality assurance; county EMS councils and MPDs. Sources include EMS levies (at a maximum of $.50 per $1000 of property value), a household tax, transit authority revenues, fire protection funds, hospital district funds and special annual EMS levies. Private agencies, as well as some public agencies, charge a fee-for-service. It is important to note that not all EMS prehospital providers have levies to help cover these costs. In the West Region, Thurston County Medic One, Tacoma Fire Department and Pierce County Fire District 3 have passed permanent EMS levies.

In-kind service of prehospital EMS volunteers is estimated at $39.2 million (see Table 3). EMS volunteers also donate time as students and instructors participating in required training for certification as BLS/ALS responders. This is estimated at over $1.1 million (see Table 4). This plan uses a prehospital volunteer formula agreed upon by the Regional Advisory Committee (RAC) in 2001. A similar formula is used to estimate training/education hours that assumes participation in one CME/OTEP course per month and class time length of two hours.

The Trauma Care Service Fund established in 1997 provides funding for partial reimbursement of trauma care costs through surcharges on traffic infractions and the sale/lease of new and used vehicles. To paint a picture with very broad strokes, this plan considers the impact of participation grants only. Using the current reimbursement formula , this revenue source would generate $595,848 over the biennium:

83 verified agencies would receive $1,200/year or $220,800/biennium,
12 designated hospitals would receive $144,524/year or $289,048/biennium, and
4 designated rehab services would receive $43,000/year or $86,000/biennium.

Prehospital needs grants and other distributions for hospital, trauma rehabilitation and physicians also impact local system development. However, they are not considered here for various reasons: the needs grants are competitive; the accessibility of reimbursements based on the current ISS inclusion criteria, MAA and Medicaid is still unknown; and important data sources to estimate these revenue sources are proprietary or not readily available to the Council.

TABLE 3: Estimated In-Kind Service of Prehospital EMS Volunteers in the West Region, 2002-03

County	Number of Amb/Aid Vehicles	EMS Personnel % Volunteers	2002-03 In-Kind
Grays Harbor	51	80%	$ 7.7 million
Lewis	51	83%	8.0 million
N. Pacific	6	81%	0.9 million
Pierce	214	36%	14.5 million
Thurston	79	62%	9.2 million
REGION TOTAL	**401**	**52% (average)**	**$ 39.2 million**

TABLE 4: Estimated In-Kind Training of Prehospital EMS Volunteers in the West Region, FY02-03

County	Training Contact Hours	EMS Personnel # Volunteers	2002-03 In-Kind
Grays Harbor	24	376	$ 264,000
Lewis	24	245	172,000
N. Pacific	24	49	34,400
Pierce	24	643	451,500
Thurston	24	278	195,200
TOTALS	**240**	**1591**	**$ 1.1 million**

SYSTEM OPERATION COMPONENTS

III. INJURY PREVENTION AND PUBLIC INFORMATION/EDUCATION:

REGIONAL IPPE PROGRAM: FOR each Program addresses the following:

A. Current Status: Briefly describe the program and identify the resources available to be used within the region.

The regional prevention program is overseen by the volunteer membership of the Prevention Committee, and staffed by a part-time coordinator from the West Region office. The mission of the Prevention Committee is "to inform the public with regard to EMS and injury prevention issues by developing effective communication with the people of the West Region in order to reduce the incidence of preventable injury and to minimize trauma when it occurs."

The committee meets bimonthly. They review data on injury causes and incidence, research, best practice and model programs. An annual prevention workshop is coordinated for the West Region EMS Conference. The region provides administrative support funds to an active coalition in each of the counties, a powerful and productive partnership. Each coalition has at least one member on the Prevention Committee. There are two membership positions on the West Region Quality Improvement Forum representing pediatric and adult injury prevention. The region's prevention coordinator attends local prevention coalition meetings and is an active member of the state Injury Prevention and Public Education Technical Advisory Committee (IPPE TAC).

B. Strengths and Weaknesses: Discuss the strengths and weaknesses of this program and include an assessment of additional needs within the region.

Partnering with the SAFE KIDS coalitions and DUI/traffic safety task forces is working very well. Each group has a diverse membership. The funding we provide is a source of stability. In return, their representation on the Prevention Committee has strengthened this group by broadening the viewpoints offered in discussion. It also provides a continuing opportunity to educate about the EMS and trauma system. The Prevention Committee has successfully planned four regional prevention workshops that are well attended.

Program Needs: *The* Council budget for prevention is relatively small ($64,000/biennium), and this means that the regional program is only staffed part-time. Although giving the bulk of the regional budget to the local coalitions helps us reach a larger audience, it also limits the ability of the regional office to fund mini-grants and operating costs of the program (coordinator education and travel, office costs, etc.). There are few resources in terms of time or money to devote to a regional public education program that promotes understanding of the EMS and trauma system.

Future program needs to consider include:

1) Sufficient funding to hire a regional prevention and public education coordinator. Currently, these job responsibilities are coupled with the office/finance manager position. Ideally, at least a .5 FTE should be dedicated to this position and filled by a person with experience in community building and media relations. Additional funding could also be used for: a) mini-grants to local communities and b) advanced training in program delivery and evaluation to key prevention advocates at county and regional levels.

2) Currently there are few resources devoted to a regional public education program that promotes understanding of the EMS and trauma system. At the very least, finding reliable, ongoing staff support (paid or volunteer) to keep the Web site up to date can serve as an important foundation to a public education plan.

C. Demographics: Identify specific demographics of the region that drive this IPPE program development in the region.

1. Identify and prioritize significant regional injury problems and high-risk groups, based on data (specify data resources utilized):
2. If appropriate also review and discuss other data elements such as total population of the region, total numbers of licensed drivers/licensed vehicles in the region and miles of roads in the region.

Data sources include the Washington State Injury Prevention Program, Trauma Registry and Office of Financial Management *1999 Data Book*. Analysis of data for 1995-1999 combined unintentional and intentional injury in looking at trends in hospitalizations and deaths. The four leading causes of injury in the West Region were: 1) falls, jumps & shoves; 2) firearms; 3) motor vehicle (occupant); and 4) poisoning. See Tables 5 and 6 below for 1995-1999 data. An overview of 1990-1999 data is available in Tables 10 and 11.

The four leading causes account for approximately 2/3 of all injuries in the region. Firearms are actually the sixth leading case of total injury (deaths and hospitalizations combined). It is included here because it is the number one cause of injury death. Trend analysis demonstrated the following:

- Statistically significant downward trend in all leading causes of injury hospitalization, except falls.
- Statistically significant upward trend in poisoning deaths; modest increase in fall deaths.
- Statistically significant downward trend in motor vehicle fatalities and firearm deaths.

High-risk groups are detailed in Table 7. In summary:

- Falls: Females 75+
- Poisonings: Males and females 35-44
- Motor vehicle: Males 15-24
- Firearms: Males 15-24

For major trauma patients admitted to designated facilities, mechanism of injury trends reveal falls and MVA (motor vehicle) have the highest counts. Falls accounted for an average 33% of major trauma (930 activations) and MVA accounted for 26% (732) over a 3-year period, 1997-1999. Considering the ISS and LOS rankings alongside frequency adds depth to the picture begun with data from CHARS and death certificates. It illustrates why primary prevention of injury is so important.

Bicycle and pedestrian injuries are not among the four leading causes. However, local providers often choose to offer bike or pedestrian safety programs because there are proven prevention strategies that can be implemented for a relatively low cost. Throughout the year, every county provides helmet fitting and sales at low or no cost at county fairs, safety days and fire department open houses. SAFE KIDS Coalitions in Pierce and Thurston Counties participate in the annual Walk Your Child to School Day (in association with National SAFE KIDS and Federal Express). Bike safety programs in the West Region have distributed and fit tens of thousands of helmets over the past five years. For effective prevention, however, distribution must be linked with proper fit and use of the helmet. The average use is slowly increasing each year, and there was a marked increased in Pierce County between 1998 and 1999. (Table 9)

Trend analysis for bicycle and pedestrian injuries in 1990-1999 is summarized below (see Table 8):

- No statistically significant trend in bicycle-related hospitalizations or deaths
- Substantial decline in pedestrian hospitalizations and deaths; tests for trend did not achieve statistical significant due to small numbers.

TABLE 5: LEADING CAUSES OF INJURY
West Region 1995-1999

	Deaths		Hospitalizations		Total	
Cause of Injury	Count	Rate	Count	Rate	Count	Rate
Falls, jumps & shoves	344	6.7	13,641	264.7	13,985	271.4
Firearms	674	13.1	387	7.5	1,061	20.6
Motor vehicle (occupant)	539	10.5	2,580	50.1	3,119	60.5
Poisoning	515	10.0	3,157	61.3	3,672	71.3
Total injuries in region	2,946	57.2	30,356	589.1	33,302	646.3

Source: Washington State Department of Health, Injury Prevention Program

TABLE 6: LEADING CAUSES OF INJURY BY INTENT
Injury Deaths and Non-Fatal Hospitalizations: Mechanism by Intent, West Region, 1995-1999

	Manner / Intent									
	Unintentional		Suicide		Homicide		Undetermined, Legal, War, Other		Total	
Mechanism / Cause	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Falls, jumps & shoves	13,920	270.1	52	1.0	4	*	9	0.2	13,985	271.4
Poisoning	1,270	24.6	2,041	29.6	5	0.1	356	6.9	3,672	71.3
Motor vehicle (occupant)	3,103	60.2	12	0.2	4	*	0	0.0	3,119	60.5
Firearms	134	0.6	506	9.8	365	7.1	56	1.1	1,061	20.6

Source: Washington State Department of Health, Injury Prevention Program

TABLE 7: High Risk Groups by Age for the Four Leading Causes of Injury: West Region, 1995-1999

FALLS High risk group: Females 75+				**POISONINGS** High risk group: Males and females 35-44			
Age	65-74	75-84	85+	Age	25-34	35-44	45-54
Count	2093	4142	3654	Count	212	339	234
Rate	11.8	49.0	189.4	Rate	20.4	36.3	12.6
MOTOR VEHICLE INJURIES High risk group: Males 15-24				**FIREARMS** High risk group: Males 15-24			
Age	15-24	25-34	35-44	Age	15-24	25-34	35-44
Count	763	622	509	Count	98	184	113
Rate	58.4	29.4	22.2	Rate	20.4	36.3	12.6

Source: Washington State Department of Health, Injury Prevention Program

TABLE 8: Trends in Bicycle and Pedestrian Injuries, 1990-1999

Estimated annualized change in incidence, 1990-1999	Bicycle Ages 10-17	Pedestrian Ages 5-14
Injury hospitalizations	-1.6%	-5.1%
Injury deaths	+2.3%	-11.4%

Source: Washington State Department of Health, Injury Prevention Program

TABLE 9: Bicycle helmet use, 1995-1999 (percent use, by county)

County	1995	1996	1997	1998	1999	5-yr Avg. 1995-1999	5-year Avg. 1994-1998
Pierce	50.0%	56.5%	61.2%	44.2%	**60.1%**	54.4%	51.4%
Thurston	57.0%	50.7%	50.0%	54.5%	**55.0%**	53.4%	52.6%
Total (for 15 counties in survey)	44.9%	47.1%	47.3%	48.7%	**52.7%**	48.1%	45.8%

Source: Washington Traffic Safety Commission, 1998 and 1999 Bicycle Helmet Survey Results.

TABLE 10: Nonfatal hospitalized injuries in West Region: Top four causes, 1991-1999

1991-1995			1994-1998			1995-1999		
Cause	**Count**	**Rate***	**Cause**	**Count**	**Rate***	**Cause**	**Count**	**Rate***
Falls	12,848	266.5	Falls	13,247	260.9	Falls	13,606	264.0
Motor vehicle (occupant)	3,051	63.3	Motor vehicle (occupant)	2,715	53.5	Motor vehicle (occupant)	2,571	49.9
Self-inflicted	2,477	51.4	Self-inflicted	2,455	48.3	Self-inflicted	2,417	46.9
Assault	1,297	26.9	Assault	1,247	24.6	Assault	1,232	23.9
SUBTOTAL	19,673	---	SUBTOTAL	19,664	---	SUBTOTAL	19,826	---
% of W Reg nonfatal hosp.	68%	n/a	% of W Reg nonfatal hosp.	66%	n/a	% of W Reg nonfatal hosp.	66%	n/a
Total W Reg nonfatal hosp.	29,483	611.5	Total W Reg nonfatal hosp.	30,039	591.5	Total W Reg nonfatal hosp.	30,356	589.1

*Rate per 100,000 resident population.
Source: Washington State Department of Health, Office of Hospital and Patient Data, CHARS, March 2001.

TABLE 11: Fatal injuries in West Region: Top four causes, 1991-1999

1991-1995			1994-1998			1995-1999		
Cause	**Count**	**Rate***	**Cause**	**Count**	**Rate***	**Cause**	**Count**	**Rate***
Motor vehicle (occupant)	566	11.7	Motor vehicle (occupant)	553	10.9	Motor vehicle (occupant)	532	10.3
Suicide	744	15.4	Suicide	799	15.7	Suicide	809	15.7
Homicide	362	7.5	Homicide	333	6.6	Homicide	289	5.6
Falls	257	5.3	Falls	303	6.0	Falls	314	6.1
SUBTOTAL	1,929	---	SUBTOTAL	1,988	---	SUBTOTAL	1,944	---
% of W Reg fatal	71%	n/a	% of W Reg fatal	68%	---	% of W Reg fatal	66%	---
Total W Reg fatal	2,734	56.7	Total W Reg fatal	2,926	57.6	Total W Reg fatal	2,946	57.2

*Rate per 100,000 resident population.
Source: Washington State Department of Health, Center for Health Statistics, Death Certificates, March 2001.

D. **Goals**: Identify the Regional EMS/TC system's long-term and short-term goals, objectives, strategies and projected costs to improve this IPPE program.

West Region prevention objectives and strategies are chosen based on data, interest and available resources at local, regional and state levels. Regional emphasis will be placed on encouraging the involvement of local EMS and trauma care providers in programs that address:

- Falls prevention for older adults
- Motor vehicle (occupant) to include car seats, seat belts, impaired driving
- Bicycle, scooter and skateboard safety to include helmet distribution and fitting in the context of developing ongoing practice scenarios for youth and families
- Promoting and providing education in basic injury prevention practices and principles that is geared to the EMS and trauma care provider

The three primary vehicles for addressing these issues will be coalition building, education and mini-grant funding.

GOAL: To reduce preventable/premature death and disability due to injury in the West Region.

OBJECTIVE ONE: Support the development and/or growth of at least one community-based injury prevention coalition in each county of the West Region through a contract process that equitably distributes $36,000 of regional funding for FY02.

Strategies

1) Annual contract with each county for local coordination of an injury prevention coalition, with a specific requirement that EMS and trauma care providers are invited to participate. Contracts to be awarded to the following coalitions (housed at agency in parentheses) for a biennium total of $36,000:

Grays Harbor Injury Prevention & Traffic Safety Task Force (Grays Harbor EMS/Trauma Care Council)
Lewis County DUI/Traffic Safety Task Force (Lewis County Social Services)
N. Pacific County Traffic Safety Task Force (South Bend Police Department)
Pierce County SAFE KIDS Coalition (Mary Bridge Children's Hospital)
Thurston County SAFE KIDS Coalition (City of Olympia)

2) County contract deliverables will include the following:

Submission of membership list, bylaws and minutes
Submission of an annual report of goals, objectives, strategies and accomplishments (and quarterly reports, if available)
Coalition representation on the regional Prevention Committee that meets bimonthly.
Coalition representation at the annual Prevention workshop, 2002 West Region EMS Conference

3) Region will report on coalition activities following receipt of monthly and/or quarterly summary documents from each coalition.

Rationale for contracts with county-based prevention coalitions: The West Region's experience with funding the coalitions has demonstrated the following benefits:

- ✓ Provides funding to local prevention community through an accountable organization
- ✓ Strengthens communication, promotes cooperation and reduces duplication of effort among community members, EMS, hospitals, public health and other public safety agencies
- ✓ Provides core membership for regional Prevention Committee
- ✓ Provides opportunities to educate diverse communities about the EMS and trauma system
- ✓ Provides opportunities to integrate discussion of local, regional and state perspectives and activities in the field of injury prevention

OBJECTIVE TWO: Sponsor at least two educational events that provide didactic and hands-on experience with prevention principles and practices for EMS and trauma care providers.

Strategies for education

1) Prevention Committee will plan an annual prevention workshop to be held at the West Region EMS Conference. Annual cost is $5000.

2) Prevention Coordinator will plan an annual 1-hour injury prevention presentation at the West Region Quality Improvement Forum. Cost is minimal.

Rationale for education

- ✓ The Prevention workshop at the regional EMS Conference has been well attended and received positive evaluations for the last four years. The content is specifically geared to EMS providers and coalition members. Several community-based prevention projects in the West Region have been started as a direct result of knowledge and skills gained at one of the annual workshops.

- ✓ Attendees at the West Region QI Forum are primarily trauma service coordinators (RNs), physicians and EMS providers. One meeting a year is hosted by rehabilitation and prevention programs. This provides an opportunity to focus on strategies to close the loop, i.e., apply the knowledge and data gained during EMS response and treatment of trauma patients to guide prevention priorities for the West Region.

OBJECTIVE THREE: Provide an interactive calendar on the prevention page of the West Region web site with grant funding received from the Washington Traffic Safety Commission. Grant funding is $1000.

Strategies for central calendar

1) Web site host will design an interactive calendar page for each county in the West Region. It will include an online event entry form, visitor evaluation tool and downloadable calendars. Promotional materials will be developed to announce the calendar.

2) The calendar will be piloted in one county to work out the bugs. Initial emphasis will be on advertising traffic-safety related events and meetings; for example, car seat checks and trainings, DUI emphasis patrols, DUI/traffic safety task force meetings. Train local coalition members to maintain their county calendar page.

3) Expand the calendar to other counties in the region. Expand the content to include a full range of injury prevention activities.

Rationale for central calendar

- ✓ Prevention activities are flourishing on the local level. The calendar will increase communication among the many groups coordinating prevention activities and be the start of an effort to catalog resources and programs in the West Region. It is important to increase awareness among providers about partners, programs, resources and perspectives on the continuum of local through national levels in the field of traffic safety specifically, and injury prevention in general.

OBJECTIVE FOUR: Provide mini-grant funding to local providers for projects that address the identified priority areas.

Strategies for mini-grants

1) Mini-grants are being awarded to five traffic safety programs to initiate or enhance DUI/traffic safety related projects. Final project reports will be featured on the West Region web site. Project coordinators will be invited to present a poster display at the annual Prevention Workshop. Cost of $5000 will be funded through a DOH grant from the Washington Traffic Safety Commission

2) Distribute mini-grants to designated trauma facilities to assist them in implementing prevention programs required of designated facilities. Estimated grant funds available: $3000.

2) 3) Distribute up to 500 bicycle helmets to programs that provide helmet fitting and bicycle safety education. Cost could range from $1500-$3000, depending on donations, budget and grant.

Rationale for mini-grants

✓ Mini-grants are a highly effective means to seed projects, especially in rural communities and volunteer agencies. In addition, mini-grants have contributed to the start-up and long-term growth of programs such as *Trauma Nurse Talks Tough* at Good Samaritan Hospital, *Risk Watch* in schools of Lewis and Thurston Counties, and the *FREE Program* (Falls Reduction through Education and Exercise) in Thurston County.

IV. PREHOSPITAL

A. Communication:

1. Current Status: Describe the current regional communications system, including:

a. Public Access (e.g., E911, etc.) Refer to Patient Care Procedure #1: System Access.

Enhanced-911 (E-911) is available to residents in Grays Harbor, Lewis, Pierce, N. Pacific and Thurston Counties. All counties in the region have a centralized call-receiving center and central dispatch, with the exception of N. Pacific and Pierce Counties.

N. PACIFIC COUNTY: Raymond Fire Department receives and dispatches EMS calls for N. Pacific County (the Pacific Ambulance District). This includes the city of Raymond and the surrounding Fire Districts #1/Ocean Park, #3/Willapa Valley, #6/Bay Center, #7/Nemah and South Bend Fire Department. Fire District #5/North Cove & Tokeland is dispatched through Grays Harbor Communications.

PIERCE: In Pierce County, 911 EMS calls are routed to one of seven dispatch centers: American Medical Response, Buckley Dispatch, FireComm (Tacoma); Madigan Army Medical Center, Puyallup City Communications, Sumner Dispatch and Tacoma Fire Department. Over 90 percent of Pierce County calls are dispatched through FireComm and the Tacoma Fire Department.

b. Dispatch

1) Training for dispatch personnel
Refer to Patient Care Procedure #1: System Access.

Over 95 percent of dispatchers are current in the training required by their communications center. All communications centers have EMD and CBD training included in their continuing education or recertification. Table A details the types and frequency of training offered in each county.

2) Dispatch prioritizing
Refer to Patient Care Procedure #2B: Dispatch and Patient Care Procedure #2A: Communications.

Regional procedures specify dispatch priority of the closest appropriate level and number of prehospital care providers to the scene. The appropriate dispatch will be have verified trauma services dispatched to trauma patients and appropriate EMS services to EMS patients.

Dispatch prioritizing is done in a variety of ways in the West Region. See Table A.

3) Provisions for bystander care with dispatcher assistance.

Refer to Patient Care Procedure #2A: Communications.
Pre-arrival telephone medical instruction, including CPR, is provided by West Region dispatchers to well over 90 percent of the callers requesting EMS.

4) Any Patient Care Procedures (PCPs) or County Operating Procedures (COPs) developed to improve communications.

The relevant Patient Care Procedures have been cited above.

c. Primary and alternative communications systems.

Provider Communication System Integration: *Communication* between ambulances and health care facilities is primarily through VHF-HEAR and cellular phones. Access is good along the highways in this region. A small part of the region, essentially downtown Tacoma, is covered by UHF-MEDCOM. Thurston County Medic One uses an 800 MHz trunked system. The 800 MHz analog systems are gradually being phased out. The new system will be an 800 MHz digital system. Cellular phones have become a primary method of prehospital/hospital communications. The potential for a problem with congestion exists and, of course, there are "dead" spaces for these methods of communication in areas of each county.

Communication between health care facilities is accomplished primarily through HEAR, an acronym for hospital emergency administrative radio. HEAR provides three channels for medical communications: 155.340, 155.400 and 155.280. All transport ambulances in the region are equipped to communicate on the HEAR system; however, not all first response vehicles are. Additionally, all hospital emergency departments in the Region have access to HEAR for communications between facilities. Health care facilities generally contact their on-call personnel by means of pagers. Public telephones are backup for both of these systems and are the primary vehicle for communication in the Morton area (Lewis County). Some Pierce and Thurston County hospitals have developed a disaster radio system that is operated by HAM radio groups and has packet radio capability.

Divert notification is functioning effectively in the West Region, and no major problems have surfaced in discussions at the West Region QI Forum or the Council. However, a regional and statewide system that provides current status for all health care facilities would be welcome. The Puget Sound Hospital Capacity Web site went online in December 1999 for hospitals in King, Pierce and Snohomish Counties. The goal is for each hospital to electronically update bed census and ED status at least twice daily. Use of the site is still being actively explored in Pierce County, and an effort will be made to utilize this technology if it is acceptable to the prehospital dispatching system. The Pierce County Medical Program Director has taken a lead role in advocating this change.

The system might prove useful to dispatch centers if an adequate system of ongoing updates were developed. Since the potential exists for the system to serve the entire state, the Council will encourage hospitals in Grays Harbor, Lewis, N. Pacific and Thurston Counties to continuing participation and keep their information current. The site can be accessed at: http://capacity.medical.washington.edu Password: look

d. A discussion of system operation during single patient, multiple-patient, mass casualty and disaster incidents, identifying ambulance to ambulance, ambulance to dispatch, and ambulance to hospital communications systems.

For single patient, multiple patient and mass casualty patients, communication is designated by the frequency assigned by dispatch. For disaster incidents on the county or state level, there are plans in place that designate how communications will be established. Ambulance to ambulance communication is assigned a frequency by dispatch, as well as ambulance to dispatch. Ambulance to hospital communications is done via cell phones.

e. Roles of other public and private agencies, e.g., police to fire to ambulance.
Refer to Patient Care Procedure #3: Medical Command at the Scene.

The regional standard is for the incident command system to be used at all times. The medical commander should be the individual empowered by the local jurisdiction. Law enforcement is responsible for overall scene security.

f. Evaluating communication system providers and dispatch activities using the attached Table A.

The West Region conducted the Communications Center Survey in June 2001, and the are detailed in Table A (pages 19-21). In addition, annual communications surveys were conducted through the local EMS council offices in 1997-1999. The Joint Committee reviews this information. Any relevant patient care issues are addressed by the Council or the West Region Quality Improvement Forum, as appropriate.

2. **Strengths and Weaknesses:** Discuss the strengths and weaknesses of the current system to include an assessment of additional needs within the region.

It is important to encourage regional dialogue about communication issues among emergency management, communications centers, prehospital EMS, fire districts and hospitals are important to pursue. As several recent events in Washington State and other parts of the country have shown, it cannot be "assumed" that all responding providers and involved citizen bystanders will be on the same page at the start of a large-scale incident. It is even a challenge to marshal a meeting of this diverse group outside a disaster, not because of lack of interest, but because of competing demands for time and resources. The Communications Center Survey is a good starting place to educate Council members about the diversity among these agencies. The Joint Committee will evaluate the survey results. Incomplete answers need follow-up to determine if there is an area of concern, or if the survey design could be improved. In addition, the regional office has a growing relationship with the county emergency management departments that are willing to provide meeting minutes and an annual update on drills and activations. We have an opportunity to educate these contacts about the EMS/trauma system, at the same time that we are learning more about their organizations.

Experience has shown that communications are quickly overwhelmed in large-scale incidents, for example, the 2001 Nisqually earthquake. Internet connection, HAM radio or face-to-face rapidly turned out to be the only available means of communication for certain time periods. The Tacoma Trauma Service discovered that intra-department communications based on regular phone lines were jammed, and staff had to walk between areas to communicate. They are developing an alternate internal phone system to address this problem.

Local providers have expressed concern about the unreliability or inability of radio equipment (HEAR and 800 MHz) to meet current or future needs. As the government auctions off frequency spectrum, especially the VHF bank, it will affect the availability of FCC communication frequencies. The use of cellular phones

as a primary system with priority for emergency medical communications will require a change in WAC 246.976.310. At this time, the cellular infrastructure does not exist and the cost to build it is prohibitive.

3. Demographics:

a. Identify specific demographics of the region that impact communications system development in the region.

The West Region is made up of hills, valleys and large areas of open water, i.e., the Pacific Ocean. This topography impacts the communications system. For a more detailed description of the region's geography, see page 39. Since the beginning of EMS in the 1970s, there have been many "Band-Aid" systems funded by federal, state and local tax dollars. As the EMS system continues to expand, the need for a better communications system becomes more apparent. A satellite system made available to all EMS, hospital, fire, police and other public safety agencies might be workable. The weakness of this suggestion is the large amount of funding it will require.

b. If appropriate also review and discuss other data elements relating to regional communication issues and systems.

Table 12: Fire and EMS Dispatches in the West Region, 2000

	Grays Harbor	Lewis	N. Pacific*	Pierce	Thurston	Total for West Region
Fire	1,345	1,422	110	13,094	5,873	**21,844**
EMS	9,860	5,460	1,230	85,661	17,616	**119,827**
County Total	11,205	6,882	1,340	98,755	23,489	**141,671**

Note: Data for N. Pacific does not include South Bend Fire Department.

In 2000, EMS and fire dispatches increased by close to 25% compared to 1998. The average rate of population growth over the past decade was 19.8%.

4. Goals: List the Regional EMS/TC system's goals, objectives, strategies and projected costs to improve the communications system to build on the strengths and mitigate the weaknesses of the current system.

Goal

The West Region goal is to create, enhance and maintain a viable communications system that meets the needs of the regional EMS and trauma system providers, and that is effectively linked with a statewide communications system.

Objectives & Strategies

Statewide Communications System: Monitor developments at the state level regarding the EMS communications system. It will be extremely helpful to local providers if communications and training models can be developed at the state level, based on the assessments being done by the Disaster Technical Advisory Committee, the Public Health Performance Assessment, and the Washington State Emergency Services Council on Domestic Terrorism. Cost: Insufficient information available to estimate cost at this time.

Capacity Web Page: Encourage all West Region hospitals to participate in the Web-based model for communication of divert status. Cost: Minimal to region.

Dispatch Centers: Maintain and enhance relationships with communications centers in the West Region; for example, invite them to a Council meeting for a roundtable discussion. Cost: Staff time for meeting planning and attendance.

Disaster Preparation: Continue to offer education about actual incidents and model communications programs at the annual EMS conference, West Region QI Forum and other appropriate venues. Cost: $750 per presentation. In the past, conference presentations included the Columbine High shooting and the Pierce School Responder System. Future topics may include: 1) Update on the evolution of Pierce County's School Violence Preparedness Program; and 2) Overview of the preparedness model being implemented by Olympia School District's Safety Task Force (for example, one component involves training administrators and teachers about incident command and communications issues).

EMD Training: Encourage continued region-wide participation in EMD training for new/replacement personnel and ongoing/refresher training for current personnel. Seek funding for EMD training from federal or state E-911 communication funds. Explore ways to work with the Criminal Justice Training Center to promote EMD training. Cost: Staff time to conduct research or attend meetings; there is no regional funding currently available to sponsor EMD education/training.

B. **Medical Direction of Prehospital Providers:** Discuss the system of off-line and on-line medical direction. Discuss the strengths and weaknesses of the current system, and list the Regional EMS/TC system's goals, objectives, strategies, and projected costs to improve the medical direction within the system.

Refer to Patient Care Procedure #3: Medical Command at the Scene, and Patient Care Procedure #11: EMS/Medical Control–Communications.

Off-line medical direction of prehospital/inter-facility provider

Medical off-line direction is delegated to the individual county Medical Program Directors. MPDs recommend training content and schedules to meet local county needs and training requirements established by DOH. Recommendations to DOH for certification and re-certification reside under MPD authority. The individual providers are responsible to the county MPD for documenting and demonstrating accomplishment of CME requirements and skills. As stated in WAC 246-976-920 (3) (b): In accordance with department policies and procedures, the MPD may delegate in writing duties relating to training, evaluation, or examination of certified EMS/TC personnel, to qualified non-physicians.

Each MPD is responsible for establishing countywide quality assessment programs to assure quality care is provided by all prehospital providers. The implementation of the trauma system requires the county MPDs to participate in the West Region Quality Improvement Forum, to assist with the review of statistical markers of performance, review/revise regional and county patient care procedures and address any prehospital issues identified as needing attention.

Online medical direction of prehospital/inter-facility providers

All prehospital orders will originate from local hospital base stations whose operations are overseen by the local MPD. Exceptions will be only for very remote areas technically unable to make radio/phone contact. The region identifies "radio silent" areas and works with the state to and counties toward eliminating this urgent problem.

As stated in WAC 246-976-920 (3) (a): In accordance with department policies and procedures, the MPD may delegate in writing any duties, other than those described in the WAC subsection (2)(c), (j), and (k), to other physicians.

Online physicians (physician advisors) in the base stations are delegated by the county MPDs to provide medical direction to prehospital care personnel in the field. This direction is consistent with approved MDP protocols. These advisors are emergency department physicians delegated by the MPD based on county determined qualifications.

Physician advisors may delegate the actual field communication to emergency department nurses who have been qualified under specific county requirements. All such nurses operate under the direct supervision of the advising physician.

TABLE A

COMMUNICATIONS CENTERS SURVEY
By County

	Grays Harbor County	*Lewis County*	*North Pacific County*	*Thurston County*
1. Citizen Access	911 360-533-8765 800-281-6944	911 is consolidated PSAP for county; has enhanced 911 service from wire line phones	E911	911 or Emergency 7-digit number
2. Consolidated	Yes	Yes	Yes	Yes
3. Number Employed	19	21	10	42
4. Number Not Trained	3	0	0	0
5. Kinds of Training & How Often	TTY every month; Surf Rescue every month; CPR/First Aid every 3 years; EMD Recertification every 2 years	TTY-TDD, every 6 months; EMD/CBD Continuing Education Training, every 3 months; ACCESS Training/Certification, every 2 years	EMD, every 2 weeks	CBD & Telecommunicator I or II Refresher, annually; Disaster, as approved
6. On-going Training	Yes. Review by our EMD trainer	Yes	Yes	Yes, Regional
7. Kinds of Protocols	Protocols were created by our local Medical Program Director	ALS/BLS per the Criteria Based Dispatch (CBD) training	Claussen System	Criteria based EMD protocols (King County)
8. Medical Director Involvement	Medical Program Director reviews all changes to current procedure, including directions given and questions asked by the telecommunicators	Yes, he serves as the Lewis County EMD Medical Program Advisor	Yes, review and signature only. The medical director has no other involvement	Yes, monthly Quality Improvement Committee
9. Dispatch Prioritizing	We currently do not prioritize any service. All calls are dispatched as an ALS response. Priority E = Emergency	Unsure what this means; we dispatch ALS/BLS and BLS yellow (no lights or sirens)	Alpha, Bravo, Charlie, Delta is the furthest we go. We use no other prioritization system.	Priority 1 – 11 based on approved classification by the fire service and MPD
10. Bystander Care	Yes	Don't know	Yes	Yes
11. Pre-arrival Instructions	Yes	Yes	Yes	Yes
12. Quality Assurance	Yes	Yes	Yes	Yes

TABLE A

COMMUNICATIONS CENTERS SURVEY

By County

Pierce County	***FIRECOMM***	***Puyallup City Communications***	***American Medical Response***
1. Citizen Access	Yes	Yes	Yes
2. Consolidated	No	No	No
3. Number Employed	18	13	33
4. Number Not Trained	1	13	3
5. Kinds of Training & How Often	Each day have 6 minutes training in various subjects Each week –EMD Each week-Equipment	Recertification every 2 years	Every 3 months review of basic call taking Every month review calls taken using CBD Every 3 months update of procedure changes
6. On-going Training	Yes	Yes	Yes
7. Kinds of Protocols	Criteria based dispatch-EMD Operations manual – Fire protocols	Criteria based dispatch	King County CBD protocols
8. Medical Director Involvement	Yes – Dr. Waffle helped establish the C.B.D. Is consulted on all changes	Yes –approves guidelines, final approval of changes, overall approval of program	n/a
9. Dispatch Prioritizing	??	By ALS & BLS	Medic Response, BLS-RED, BLS-YELLOW
10. Bystander Care	Yes	Yes	Yes
11. Pre-arrival Instructions	Pre-arrival instructions are given for all medical calls	Yes	Yes
12. Quality Assurance	Yes	No –due to low staffing	Yes

TABLE A

COMMUNICATIONS CENTERS SURVEY

By County

Pierce County	***Sumner Dispatch***	***Rural/Metro Ambulance***	***Tacoma Communications Ctr***	***Buckley Dispatch***
1. Citizen Access	Center is equipped with Pierce County Enhanced 911;E9-1-1		911, Telephone and walk-in	911, Business phone lines, citizen contacts
2. Consolidated	No	Yes	Yes	Yes
3. Number Employed	6	15	11	6
4. Number Not Trained	2	2	0	2
5. Kinds of Training & How Often	EMD every 2 years ACCESS every 2 year Domestic violence training for dispatchers every year In progress type calls every year First Aid and CPR every 2 years	Every 6 months field ride time. Every 2 years EMD Every 2 months CBD Every 2 months SOP review	Every month EMS, IMS, EMT skill Every month Fire/IMS/fire related/emergency management terrorism Every year leadership and supervision Every 2 years promotion preparation	Various ongoing for re-certs, Every 6 months for APCO, Every 6 months for LEIRA, Every 2 years for ACCESS
6. On-going Training	Yes	Yes	Yes	Yes
7. Kinds of Protocols	Department. policies and procedures, ACCESS requirements and RCW's	CBD and local EMS protocols. In house SOP.	P.C. Pt. care protocols, CBD	Certified telecommunitor I & II through APCO
8. Medical Director Involvement	Yes	n/a	Yes	No
9. Dispatch Prioritizing	n/a	n/a	Alpha-1 Bravo-2 Charlie-3 Delta-4	Prioritized numerically by CAD
10. Bystander Care	Yes	No-don't do 911 directly	Yes	
11. Pre-arrival Instructions	Yes	Yes-but don't receive 911 directly	Yes	No
12. Quality Assurance	Yes	Yes	Yes	Yes

TABLE A

COMMUNICATIONS CENTERS SURVEY
By County

Pierce County	***Madigan Army Medical Center***
1. Citizen Access	911 on Ft. Lewis; 911 in MAMC; from outside Ft. Lewis they dial our direct dispatch number to contact MADCOMM for an ambulance. Madigan is the PSAP for Ft. Lewis so we transfer depending on which agency is needed.
2. Consolidated	No
3. Number Employed	11
4. Number Not Trained	1
5. Kinds of Training & How Often	Every year: EMD Every 2 years: CPR Every month: TDD Every 2 years: Telecomm Refresh Every day: OJT
6. On-going Training	Yes, regional. We have attended the CJTC approved regional training Telecomm I & II at their site. This is valid for 2 years, and 24 hours of continuing education or in-service training is required in order to be certified. This may be a state requirement in the near future.
7. Kinds of Protocols	E911 must be answered in 2 rings. Fire Department called on all priority responses. Must notify Military Police on all abandon calls. Notify Police on any MVA and Domestic. Each Dispatcher trains on TDD monthly. Agency phone checks done daily on each shift. WA State Patrol notified on any car crash on I-5 or State Hwy. Collect information from cell phone callers before transferring to needed agency. EMD used on all E911 calls for pre-arrival instructions.
8. Medical Director Involvement	Dr. Siegel reviews all SOPs, Protocols, Procedures and Policies. EAS provides the input when asked.
9. Dispatch Prioritizing	We use our Emergency Medical Dispatch guide for pre-arrival instructions and direct ambulance according to severity of the problem and dispatch according to the protocol in our EMS. Some response changes have been made in order to fit the needs in our response area on Ft. Lewis and McChord.
10. Bystander Care	Yes
11. Pre-arrival Instructions	Yes
12. Quality Assurance	Yes
13. Additional Comments	MADCOMM is very unique. We do our own call taking, receiving and dispatching. MADCOMM is evolving into a state-of-the-art Communication Center as it enhances both training and automation. We have the privilege of being located adjacent to the Emergency Department of a Level II Trauma Center. All 911 calls come into MADCOMM PSAP. Fire and Military Policy calls are redirected to those agencies on Ft. Lewis, where they are appropriately dispatched by those agencies.

Strengths and weaknesses of the current system:
The four MPDs in the West Region are very active at the local county levels. They have limited time to devote to regional meetings; however, they are all available by phone and e-mail. Additional funding is needed to support the activities required of Medical Program Directors.

Goals, objectives, strategies and projected costs to improve the medical direction within the system:
GOAL: To support the full participation of the Medical Program Directors in the regional EMS and trauma system.

OBJECTIVE ONE: Encourage MPD participation on the Council and the West Region QI Forum
Strategies:

1) Continue to sponsor the annual MPD Mini-Conference. This has been held for two years and been very productive for the attendees. Cost is $500.
2) Encourage MPD attendance at the West Region EMS Conference as participants and/or presenters. Cost for travel and honorarium to conference is estimated at $500-$1,000**.**
3) Sponsor "A Leadership Guide to Quality Improvement for Emergency Medical Services Systems," a 2-day course developed by National Highway and Traffic Safety Administration (NHTSA). Encourage MPDs, prehospital and hospital providers involved in quality improvement to attend. Cost is estimated at $5,000.

C. Prehospital EMS and Trauma Services:

1. **Current status:** Describe available resources, configuration, staffing and service levels of current prehospital services.
   a. **Current EMS/TC Personnel Resources:** Identify the EMS and trauma care workforce resources available within the region, by county, to include all levels of prehospital personnel.

Table 13: Prehospital Personnel in the West Region

	FR	EMT	IV	AW	IV/AW	ILS	ILS/AW	PM	Total
GRAYS HARBOR									
Paid	3	36	22	0	0	0	1	50	112
Volunteer	102	189	18	0	0	0	2	5	316
Grays Harbor total	105	225	40	0	0	0	3	55	428
LEWIS									
Paid	0	33	0	0	0	0	0	24	57
Volunteer	27	197	0	0	2	0	0	0	226
Lewis total	27	230	0	0	2	0	0	24	283
N. PACIFIC									
Paid	0	3	3	0	0	0	0	6	12
Volunteer	26	21	2	0	0	0	0	0	49
N. Pacific total	26	24	5	0	0	0	0	6	61
PIERCE									
Paid	15	889	7	0	0	0	0	314	1225
Volunteer	65	511	1	0	0	0	0	4	581
Pierce total	80	1400	8	0	0	0	0	318	1806
THURSTON									
Paid	0	136	0	0	0	0	1	43	180
Volunteer	31	252	0	0	0	0	0	0	283
Thurston total	31	388	0	0	0	0	1	43	463
Total Paid	**18**	**1097**	**32**	**0**	**0**	**0**	**2**	**437**	**1586**
Total Volunteer	**251**	**1170**	**21**	**0**	**2**	**0**	**2**	**9**	**1455**
Total Region	**269**	**2267**	**53**	**0**	**2**	**0**	**4**	**446**	**3041**

*FR-First Responder, EMT-Emergency Medical Technician, ILS-Intermediate Life Support, AW-Airway, IV-Intravenous, PM-Paramedic
Source: Dept. of Health, Office of Medical and Trauma Prevention, 2001.

b. **Prehospital Training Resources:** Identify available training resources for all levels of prehospital EMS/TC personnel.

Table 14: Prehospital Training Resources in the West Region

	EMT Initial & Recert	EMT-P Initial & Recert	OTEP & CME	First Responder	Trauma
Bates Technical College	✓		✓		
Centralia College	✓		✓		
Grays Harbor College	✓		✓		
Grays Harbor EMS Council	✓	✓	✓	✓	✓
Pierce College	✓		✓		
Pierce County EMS Office	✓		✓	✓	
Raymond Fire Department	✓		✓	✓	✓
Tacoma Community College	✓	✓	✓		✓
Tacoma Fire Department	✓	✓	✓	✓	
Thurston County Medic One	✓		✓	✓	
West Region EMS/TC Council			✓		✓
Individual Instructors			✓	✓	✓
In-house Training			✓	✓	

c. **Prioritizing and Conducting Prehospital Training: Discuss** the need for training to maintain existing level of personnel and to add needed personnel to the system, including a discussion of strategies for prioritizing and securing needed prehospital personnel training.

Pierce County: The Pierce County EMS system of personnel is unique in the West Region, which can make training challenging. There are 1806 prehospital providers. Of these 33% are volunteer and 67% paid; 78% are EMTs and 18% are paramedics. There are a great number of EMTs and paramedics who work for both the Fire Service (paid or volunteer) and private ambulance companies. Training needed to maintain existing personnel is done for the most part at the agency level. Most of the agencies are participating in a countywide OTEP plan. The plan is to urge FRs and EMTs to participate in the program, and encourage the agencies to remain consistent with the training. There are plenty of college EMT courses available for agencies to secure initial training for their personnel. BLS Evaluator/Lay instructor classes are offered for agencies to update personnel to teach/train the OTEP classes.

Grays Harbor/N. Pacific Counties: Both Counties have paid and volunteer responders. Grays Harbor has 428 prehospital responders: First Responders, Emergency Medical Technicians, IV Techs, Defib Techs, and Paramedics. N. Pacific has 61 First Responders, EMTs and Paramedics. Paid responders amount to 13% in both counties, leaving the bulk of response to the volunteers. The basic training for all responders is provided through Grays Harbor EMS, along with a contract for EMT training with Grays Harbor Community College. Classes such as First Responder, IV Tech, Defib Tech, AID and other specialized training are offered on a needs basis by the Grays Harbor EMS Training Committee with training funds received through West Region and Grays Harbor Transit. The cost to individuals is kept to a minimum because of the large number of volunteers and small budget departments. The Office Administrator, who is contracted with DOH-EMS Licensing Division, does testing for all classes.

Each Department has appointed a training coordinator who is responsible for training and testing the OTEP program. Currently we are using a modified curriculum consisting of parts of the Northwest Region's program and King County's yearly update program. Each Department is responsible to EMS

and the MPD to provide monthly calendars and quarterly reports on their progress. ALS personnel, IV Techs and above are meeting each month for a two-hour lunch and training session. They are also required to report each quarter on intubations and IVs done in the field. EMS furnishes each provider with reports that show successes and failures for both procedures. This has been a good tool to keep abreast of any trouble spots or incidents in both counties.

All Basic classes are taught by our staff of trained instructors. At this time there are four Senior EMS Instructors and one in training. Our reasoning for so few Senior instructors is, it is necessary for each instructor to teach at least one class per year and often we have the need for only one EMT Class and one to three First Responder classes a year. So it is very hard to keep more instructors trained and busy. In most basic classes our main speakers are usually physicians, nurses or other higher level personnel. Our medical community has been kept aware of the necessity for their contact and input in classes, especially for new responders.

In this last year we have experienced a number of retirements of paid responders. When one thinks about our system of 28 years (since 1973), many of the personnel are actually reaching retirement age. We have been training the second generation of responders in many families and now have a ready group that are interested in being EMTs, Paramedics and Firefighters and following in their parents footsteps. This system has proved to be successful because persons who have been raised here in the Harbor area tend to stay if they can find stable working conditions. We have been pleasantly surprised at the number of second and, yes, even third generation responders that are still in public service in this area.

Lewis County:

In Lewis County, 83 percent of the 283 providers are volunteers. Stable and sufficient funding, along with a shrinking volunteer pool, are of concern. In addition, Lewis County does not have a local EMS Council, so this means a few devoted people carry out the necessary system administrative tasks. For the past four years, coordination of OTEP has been delivered through a partnership between Centralia College, the Medical Program Director, and EMS training officers and instructors. The college delivers one or two EMT classes per year depending on the demand. First Responder classes are provided if needed and an Intermediate Life Support course is now being developed for next year.

The primary district training is delivered as OTEP modules taught at the local districts on an ongoing calendar cycle of seven modules per year. Quarterly updates in combi-tube and defib are scheduled at the districts and do not go through the college. The College and the MPD set up special classes such as Train-the-Trainer, BLS and AHA courses. EMS training officers also meet at least twice a year to discuss items of importance to the county. Lewis County has rural and wilderness areas with limited ALS service, such as the East End of the county. When medical airlift cannot respond because of weather or no landing zone, it means that both prehospital and hospital providers may find themselves having to operate at the height of their expertise. This is why Lewis County focuses training with the rural prehospital provider clearly in mind.

Thurston County:

Thurston County Medic One coordinates community based OTEP BLS classes offered to each of the fire departments, ALS training through paramedic inservice classes, initial First Responder courses and initial EMT-B courses.

Initial EMT-B courses are budgeted for 36 students per course. The last two courses have had a total of 25 students. Thurston County Medic One budgets money for a shared course with South Puget Sound Community College but to date it has not been necessary to provide a third class.

Two First Responder courses are budgeted per year. The last few years the county has had interest for only one First Responder course. Thurston County will continue to advertise for two classes and will conduct them as needed.

Thurston County Medic One sent out 414 EMS surveys to certified providers in Thurston County. A portion of the survey asked if providers would like more OTEP classes. The providers felt that 5 classes a year were adequate, however, they would like to see a seminar once a year. A goal for Thurston County is to have a seminar for providers in 2001.

d. Additional Public Safety Personnel Role and Availability: Discuss the roles and availability of other public safety personnel within the region (law enforcement, SAR, military, etc.).

Multiple entities assist EMS in the West Region. Most help by retrieving patients from the water or wilderness areas. Following is a county listing of available responders, how they are contacted, and how often they are called upon for assistance.

Grays Harbor County
Search and Rescue is dispatched through the county sheriff's office three to four times a year to search for lost persons.

The Sheriff's Office and Ocean Shores Police are activated by Harbor Dispatch for water rescues.

The Forest Service may be dispatched to assist Search and Rescue.

The Coast Guard is phoned 25 - 30 times a year to rescue boaters in the rivers or ocean.

Lewis County
Mossyrock Search and Rescue is contacted by phone four to five times a year, usually to search for lost hunters.

Lewis County Fire District #18 has rescue divers who, through mutual aid agreements, provide dive team coverage for the eastern half of the county. They are radioed three to five times a year.

North Pacific County
Search and Rescue is available to assist Raymond Fire Department.

Pierce County
A Search and Rescue Deputy is radioed or phoned and, in turn, phones/pages the proper groups. They are called out five to eight times a month. A list of these contacts follows:

- Amateur Radio Emergency Services
- Civil Air Patrol
- Explorer Search and Rescue
- German Shepherd Search Dogs
- Horse Mounted Patrol
- Northwest Bloodhounds
- Puget Sound Sea Rescue
- Tacoma Mountain Rescue
- TAC-1 (Pierce County Mobile Communications Vehicle)
- Motorcycle Club
- 4x4 Club

Other affiliated agencies include:
- American Red Cross
- Medical Explorers
- Crystal Mountain Ski Patrol

Thurston County
The Sheriff's Dive Team is contacted by radio ten to twenty times per year.

Explorer Search and Rescue Post 278 is contacted by phone about ten times a year.

Jeep Patrol is out every weekend, during any disaster and throughout the summer patrolling the more remote/forested areas for those who are lost or in need of assistance. They find someone in need of medical assistance about once a month. They are called by radio (unless they are not patrolling, in which case they can be reached by phone) a couple of times a year.

Law Enforcement Explorer Posts #717-Olympia Police Department, #718-Washington State Patrol, and #734-County Sheriff's are called upon about once a month. Posts #717 and #734 are contacted by radio and Post #718 is contacted by phone.

Marine Rescue 741 is radioed fifteen to twenty times each year.

The U.S. Coast Guard in Seattle is phoned about once a month.

Medical Airlift
West Region has access to three medical airlift services. Airlift Northwest, located at ThunField (Puyallup) and Boeing Field (Seattle), is the most frequently used service by West Region agencies. In 1998, Airlift Northwest provided intra-hospital transport for 322 patients and flew 325 cases of prehospital trauma out of the West Region. Airlift Northwest also plays an active role in other regional activities, such as participating in the West Region QI Forum and providing training for EMS providers at the annual EMS conference.

MAST, located at Grays Army Airfield (Ft. Lewis), responds with paramedic staffing provided by Madigan Army Medical Center. Pierce County agencies may contact MAST when there is an extraction problem, for search and rescue, or if other services are unavailable. In 1998, MAST responded 22 times within the West Region. Lifeflight Network, located in Portland, services southern Lewis County and responds a few times per year.

For activation procedures for transport, refer to Patient Care Procedure #6: Air Transport.

2. **Strengths and Weaknesses: Discuss** the strengths and weaknesses of these programs including an assessment of additional personnel and training needs within the region.

The short-term goal for the West Region is to attract younger responder trainees, both in numbers and from diverse racial backgrounds. In comparison to whites, the growth in population for blacks, Native Americans, and Asians has been 6%-50% greater from 1990-1998 (see Table 17). One of the main problems in West Region, as well as most regions across the state, is the loss of volunteers. After a careful look at numbers in the West Region, it becomes apparent that our personnel are beginning to reach retirement age and there is a shortage of younger volunteers. Efforts need to be made to inform teenagers and young adults of the rewards of being an emergency services volunteer. The Explorer program, which is offered by some fire departments to train youth, makes a good effort to reach potential volunteers.

We are seeing a changing population with more racial and ethnic groups, and an older population as longevity continues to increase. We need to work toward a more diverse training to develop clinical and people skills that foster:

- the ability to recognize and understand ethnic and racial customs and values
- the ability to recognize and understand generational characteristics and values
- skills in risk management to lessen injury to personnel and lawsuits
- availability and use of Critical Incident Stress Debriefing and other tools for provider self care and health
- recognition of the EMS/trauma system as a volunteer or career pathway

To support these goals, we need to provide more education and advertising of the public service EMS performs. Funding is the bottom line to most programs and can make or break any program goal. At this time, we have no real sense of enough time or money to fund this rather ambitious program. Much of the education money available is already being used to fund existing programs.

West Region will continue to allocate 23% of our annual budget to fund OTEP programs in each county. Cost is $48,000/year plus administrative staff support. The annual West Region EMS Conference focuses on offering innovative knowledge and skills, with emphasis on the needs of rural and volunteer EMS providers. The conference is a viable way to address some of the training needs mentioned above. Conference registrations cover the average cost of $45,000/year. Conference revenue does not cover the considerable amount of staff and volunteer time needed to make this a successful event. Any conference proceeds are used to support additional requests for regional prehospital training, educational supplies or training equipment.

3. **Demographics:** Identify specific demographics of the region that may drive the expansion of the existing prehospital personnel and training, such as population by age and gender:

a. Population by age and gender:

During the last decade, the population has remained evenly divided between males and females. Population growth averaged 19.8% regionally, with a range from 4.7% in Grays Harbor to 28.6% in Thurston (see Table 20 for details). Change in resident population age 65 and older closely mirrors the overall percentage of growth in Lewis, N. Pacific, Pierce and Thurston. Grays Harbor showed a 3% decrease in 65+ residents since 1990, compared to 4.8% overall growth.

Table 15: Population by age and gender in the West Region

Age	Population	Males	Females
0-9	159,021	81,762	77,259
10-19	159,032	82,610	76,424
20-29	141,732	73,718	68,014
30-39	159,299	80,185	79,113
40-49	159,922	80,040	79,882
50-59	114,506	57,063	57,444
60-69	70,981	34,161	36,820
70-79	54,719	23,932	30,789
80+	30,937	10,791	20,147
Total	**1,050,148**	**524,259**	**525,890**

Source: Office of Financial Management, *Washington State Data Book 1999*.

b. Mortality, by place of occurrence, for region:
   1) Overall mortality
   2) Deaths by injuries
   3) Other (as available)

Overall Mortality

The four leading causes of death in all West Region counties in 1998 were heart disease, cancer, stroke and COPD (in that order). Unintentional injury, suicide and homicide were within the top eight causes of death. See Table 16 for more detail by county. The two leading causes of unintentional injury deaths are motor vehicle (occupant) and falls. It follows that these are the two leading mechanisms of injury for direct from scene transports. They account for 1,428 trauma patients, or 58.1%, in 1999-2000. (Source: Washington State Trauma Registry, May 2001).

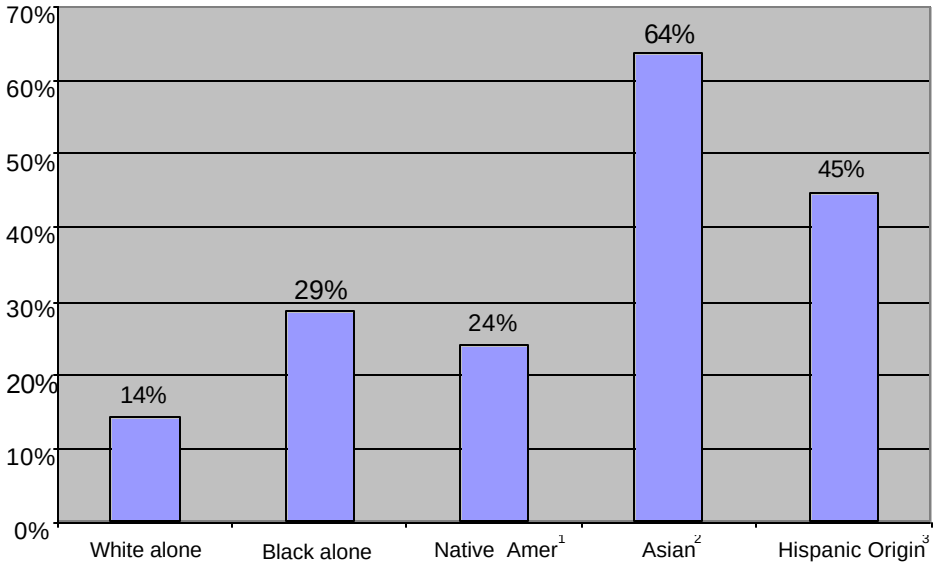
Table 16: Overall Mortality in the West Region

County	Heart Disease	Cancer	Stroke	COPD	Unit Injury	Int Injury Suicide/ Homicide	Total
Grays Harbor	202	200	60	42	18	13	**535**
Lewis	257	167	71	46	42	13	**596**
Pacific	87	68	22	10	14	6	**207**
Pierce	1,382	1,231	350	280	225	79 / 52	**3,599**
Thurston	419	371	121	102	65	35	**1,113**
Totals	**2,347**	**2,037**	**624**	**480**	**364**	**198**	**6,050**
Percent of Total	**39%**	**34%**	**11%**	**8%**	**6%**	**4%**	

COPD: Chronic obstructive pulmonary disease

Source: Center for Health Statistics, Washington Department of Health, August 1999

Table 17: West Region population change by Race & Hispanic Origin, 1990-1998



Notes:

1) Native American = American Indian and Alaskan Native alone
2) Asian = Asian & Native Hawaiian/other Pacific Islander alone
3) Hispanic Origin = Can be of any race

Source: *Census 2000 Summary File 1*, Washington State Office of Financial Management, July 2001

D. Verified Aid and Ambulance Services:

1. Current Status:

a. Identify the current Prehospital Response Areas (urban, suburban, rural, and wilderness) in each county.

b. Provide an assessment of the need for and distribution of services within the region as defined in RCW 70.168.100(1)(h). Discuss the current Regional process for determining need and distribution within each county in the region.

NOTE: If possible, include, as Appendices to this plan, maps of response areas within the region. If not possible describe in narrative format and identify if maps are on file in the regional Office. Be prepared to bring such maps to the Steering Committee's plan review.

Table 18: Count of Verified Services by County in West Region

County	# BLS	# ILS	# ALS	Total # of Verified Agencies
Grays Harbor	14	1	5	20
Lewis	12	1	2	15
N. Pacific	1	0	0	1
Pierce	23	0	13	36
Thurston	15	0	5	20
West Region Totals	**65**	**2**	**25**	**92**

Source: Grays Harbor EMS/Trauma Council, Lewis County Fire District #12, Pierce County EMS Office, Thurston County Medic One.

Grays Harbor and N. Pacific Counties

Fire district boundary maps are available in the West Region office. Response area maps will be available in March 2002. Currently, descriptions of prehospital response areas are available from the appropriate dispatch centers. Refer to Appendix D for contact information.

- Grays Harbor Communication: Service area includes Grays Harbor County and Tokeland/N. Cove in N. Pacific County.
- Pacific Communications (PACCOM): All of Pacific County except Tokeland/N. Cove.

The Grays Harbor EMS & Trauma Care Council recommendation is to amend the Min-Max to include three ILS services in Grays Harbor County and two ILS services in N. Pacific.

There are two areas in Grays Harbor County that should be updated to ILS, IV-Med Techs. Both areas are very rural and have long transport times to either meet ALS or to go to the hospital, which ever is feasible.

The first area is Fire District #4 at Amanda Park. Their transport time is around 45-55 minutes to the hospital and at least 30 minutes to rendezvous with paramedic transport. They have IV-Techs now, but are interested in ILS training to at least IV-Med Tech status.

The second area is North Beach. This area is from Ocean Shores City Limits to the Jefferson County line. It includes Fire District #16, #8, the Casino, and Quinault Indian Nation. At present Ocean Shores and Hoquiam ambulances usually respond as second-out vehicles and often meet #8 or the Indian Nation ambulance for ALS, even though Quinault Indian Nation employs one paramedic who is often "on call" from Hoquiam (more than 40 minutes away). Fire District #8 has not wanted to have "any" ALS personnel; but in the best interest of patient care, it is our recommendation that we train at least a few IV-Techs and possibly IV Med-Techs.

Pacific County contracts with the North Pacific EMS Council of Government to administer levy funding for the Pacific County Ambulance District that serves most of N. Pacific County. Raymond Fire Department is the lead responding agency for the ambulance district.

The geographic description for N. Pacific County is the northern half of Pacific County with the southern border at the Middle Nemah Bridge at Mile Post 35. The northern borders are: Lewis County Line on Highway 6 at Mile Post 25 and the Grays Harbor County Line at Mile Post 67. Raymond Fire Department has an agreement with Aberdeen Fire Department to respond to highway accidents to Mile Post 71, and an agreement with North Cove Fire District #5 to respond to Mile Post 17 on Highway 105 (toward Tokeland).

At this time, Raymond Fire Department responds to five of the small fire districts that surround the City of Raymond: Ocean Park (#1), Willapa Valley (#3), Bay Center (#6), Nemah (#7), South Bend (City and Rural South Bend #8). Most of the volunteers in those outlying areas are First Responders. Our goal is to train some of those volunteers up to the EMT level. This would be our first step in having some ILS personnel that could respond ahead of the ambulance that comes from Raymond. Most of these response times are more than 30 minutes.

Lewis County

Prehospital response area maps are available in the West Region office. The maps illustrate the boundaries of Lewis County and detail emergency service number areas that are a partial representation of municipal taxing boundaries and Fire Protection District taxing boundaries. The ESN boundaries do however extend beyond the taxing district boundaries so as to ensure that all areas will receive an emergency response. Specifically, this provision removes any "no mans lands" from the county in terms of EMS response and assigns all areas to the closest EMS provider agency. The 9-1-1 provider for the entire county is Lewis County E9-1-1/Communications Center. Refer to Appendix D for contact information.

Lewis County is a primarily rural county covering an area of approximately 2,500 square miles with only two population centers that exceed a population of 7,000, those being the Cities of Centralia and Chehalis. Most communities in Lewis County are located along Interstate 5 or US Highway 12. Both highways are significant routes of travel and commerce within Western Washington.

In Centralia and Chehalis, paid fire fighters provide first response emergency medical services with primary medical transportation being provided by a privately owned ambulance company. Centralia Fire Department provides ALS first response care while Chehalis Fire Department provides BLS. In the rural areas adjacent to Centralia and Chehalis, Fire Districts provide BLS first response with primary medical transportation being provided by a privately owned ambulance company.

The next ring of Fire Districts are almost exclusively volunteers and provide BLS first response and medical transportation. The exception is a daytime paid ALS unit serving Toledo, Winlock and Vader Fire Districts. All Fire Districts that provide medical transportation west of Mossyrock have ALS intercept contracts with the private ambulance company where the paramedic unit meets and boards the fire district ambulance while enroute to the receiving medical facility.

Fire Districts east of Mossyrock provide BLS first response and medical transportation. No ALS is available and limited ILS is present in the Randle-Packwood areas.

In total there are 4 city fire departments and 18 fire districts located in Lewis County. Some cities and fire districts have service contracts creating one fire department. Currently, 16 of 18 fire districts provide BLS services, 13 provide medical transportation. Of the 4 city fire departments, 3 provide BLS services and 1 provides medical transportation. The fourth city, Centralia, provides ALS first response and backup medical transportation. One private ambulance company stationed in Centralia and Chehalis provides inter-facility transports and ALS-BLS 9-1-1 system transportation.

Advance Life Support ambulances in Lewis County are regulated by a county ordinance that is administered by the county health department. Definitions for urban, suburban, rural and wilderness are either consistent with those contained in WAC, or more stringent. For example, urban in Lewis County is described as incorporated cities with a population in excess of 5,000. Had this change not been made Centralia and Chehalis would fall under the suburban classification by DOH state licensure definition.

In summary, BLS services are reasonably well placed and functioning adequately with some exceptions relative to response time. Full time ALS services are concentrated in the NW portion of western Lewis County and completely absent in the eastern portion of the county. ALS units are needed in the southern, central and eastern sections of the county.

Pierce County
EMS response area boundaries are available from the appropriate dispatch center in Pierce County listed below. Refer to Appendix D for contact information.

- Buckley Dispatch: The City of Buckley, Pierce County Fire Districts # 12, 25, and 26, and the Town of Cardonado
- Tacoma Fire Department Communications Center: The City of Tacoma, City of Fife, City of Fircrest, and Fire Dist. #10.
- Madigan Army Medical Center (MADCOMM): McCord, Ft. Lewis, Camp Murray and designated primary response areas such as Dupont/I-5 exit 120 NB to 114SB/Tillicum and Woodbrook for Medical. The Ft. Lewis Fire Department covers Ft. Lewis area and Camp Murray while Military Police cover Ft. Lewis area only.
- FIRECOMM: Fire Districts #'s 2, 3, 4, 5, 6, 8, 13, 15, 16, 17, 20, 21, 23, 27, 42, 43, 46, and 48. In addition, dispatches to the City of Lakewood, University Place, Bonney Lake, Edgewood, Roy, South Prairie, Dupont, Eatonville, Ruston and Steilacoom.
- Sumner Communications Center: The City of Sumner (15.1 square miles, approximately 13,000 people).
- Puyallup City Communications: City of Puyallup, Pierce County Fire Dept. # 11 & 14, and the City of Milton.
- Rural/Metro Ambulance: Service area is King, Snohomish and Pierce Counties (they do not receive 9-1-1 calls directly).
- American Medical Response: Pierce County

In April 2000, the Pierce County EMS Council began implementing a plan to: 1) define population density for Pierce County; 2) match the service area types (Urban, Suburban, Rural, Wilderness) with the EMS providers in that area; and 3) gather current response times from those providers.

GIS population density maps have been obtained. The Pierce County Fire Chiefs have been notified that the council will be gathering response time statistics. These will be reviewed to determine if they are currently meeting the response time guidelines or not. Prehospital response area maps will be developed in 2002.

Thurston County
Thurston County EMS and trauma agency map with ALS unit zone and placement is available in the West Region office. A detailed spreadsheet is also available that provides relevant data by jurisdiction: Responses, Verified Trauma Unit WAC requirements, time/number comparison 1996-2000. Prehospital response areas are also available from Thurston County Communications (CAPCOM), the 911 dispatch center for the entire county. Refer to Appendix D for contact information.

Thurston County EMS and Trauma Care Council reviews ALS ambulance (medical unit) response times by jurisdiction. The EMS Council modifies staffing and placement of Medic Units based on ALS EMS demand and trauma verification requirements. The EMS Council has control of Medic One/ALS funding and therefore adjusts ALS level response. The BLS agencies in the county have the authority, responsibility and funding for their BLS response areas. The ALS system provides default response to the BLS system on non-ALS responses that have not evoked a BLS response to multiple BLS dispatches.

The Thurston County EMS and Trauma Care system is in the process of developing a long range plan. The emphasis of the planning effort is to improve effectiveness and efficiency within its ALS system. The discussion to this point has been to decrease the number of ALS provider agencies contracted for countywide ALS service to improve efficiencies and effectiveness of paramedic level care. The Council wants to optimize its ability to decrease the number of ALS service providers and provide for the ability to add lower level of EMS service (i.e., ILS) in more rural areas of the County EMS System.

2. **Strengths and Weaknesses:** Discuss the strengths and weaknesses of the existing regional prehospital service delivery system.

The Council supports local agencies in meeting the requirements of WAC to assure adequate availability of prehospital aid and ambulance services for each response area, based upon agency response time standards, geography, and topography and population density. Identification of need and distribution of verified aid and ambulance services is determined by local EMS county councils in Grays Harbor/N. Pacific, Pierce and Thurston Counties. Each council has an operations committee that is responsible for recommending the minimum/maximum number of services for subsequent review and recommendation by the county EMS council. In Lewis County, this process is handled through collaborative discussions among the Medical Program Director, fire chiefs and private prehospital providers. Each county's recommendations are received for review by the Council and forwarding to DOH for approval. Refer to Trauma Plan Appendix Three for a list of all licensed West Region prehospital providers.

The local need continues to exist for funding of mandates both existing and future. The need to enhance the local funding picture will continue with increasing dependence on regionalization or special services and current/potential funding restrictions.

3. **Demographics:** Identify specific demographics of the region that may drive the expansion of the existing prehospital service delivery system. Using the State of Washington 1999 Data Book, identify the following for each Prehospital Response Area when possible or at minimum or each county.
West Region Summary (see county details in Table 15)
   a. land area: **7,215 square miles**
   b. land area in incorporated areas: **260 square miles (4%)**
   c. land area in unincorporated areas: **6,955 square miles (96%)**
   d. total population: **1,050,151**
   e. population density: **145.5**
   f. proportion of population in incorporated areas: **543,199 (53%)**
   g. proportion of population in unincorporated areas: **506,951 (47%)**
   h. If appropriate also review and discuss other data elements such as total numbers of licensed drivers/licensed vehicles in the region and miles of roads in the region.

Table 19: Demographics	Grays Harbor	Lewis	North Pacific *
a. Land area (in square miles)	1,917 sq mi	2,408 sq mi	487 sq mi
b. Land area in incorporated areas (in square miles)	51 sq mi	15 sq mi	12 sq mi
Percentage of square miles in incorporated areas	3%	1%	3%
c. Land area in unincorporated areas	1,866 sq mi	2,393 sq mi	475 sq mi
Percentage of square miles in unincorp areas	97%	99%	97%
d. Female Population	33,966	34,818	5,442
Male population	33,734	34,182	5,309
Total population	67,700	69,000	10,750
Percentage of population change: 1990-2000	4.7%	15.6%	12.0%
e. Population density / sq mi	35.3	28.7	22.1
f. Proportion of population in incorporated areas	41,175	26,815	3,450
Percentage of population in incorporated areas	61%	39%	32%
g. Proportion of population in unincorporated areas	26,525	42,185	7,300
Percentage of population in unincorporated areas	39%	61%	68%
h. Number of licensed drivers	50,694	53,353	8,178
Number of licensed vehicles	67,380	76,958	10,797

Table 19: Demographics (continued)	**Pierce**	**Thurston**	**West Region**
a. Land area (in square miles)	1,676 sq mi	727 sq mi	7,215 sq mi
b. Land area in incorporated areas (in square miles)	135 sq mi	47 sq mi	260 sq mi
Percentage of square miles in incorporated areas	8%	6%	4%
c. Land area in unincorporated areas	1,541 sq mi	680 sq mi	6,955 sq mi
Percentage of square miles in unincorp areas	92%	94%	96%
d. Female Population	348,054	103,610	525,890
Male population	351,946	99,090	524,261
Total population	700,000	202,700	1,050,150
Percentage of population change: 1990-2000	19.6%	28.6%	19.8%
e. Population density / sq mi	417.8	278.8	145.6
f. Proportion of population in incorporated areas	383,434	88,325	543,199
Percentage of population in incorporated areas	56%	49%	53%
g. Proportion of population in unincorporated areas	316,566	114,375	506,951
Percentage of population in unincorporated areas	44%	51%	47%
h. Number of licensed drivers	479,891	156,720	748,836
Number of licensed vehicles	570,761	208,701	934,597

* North Pacific figured at 50% of county total

Source: Washington State Office of Financial Management, *1999 Data Book*

Table 20: Population Change in West Region, 1990-2000

County	1990 Population	2000 Population	Change	Percent Change
Grays Harbor	64,175	67,194	3,019	4.7
Lewis	59,358	68,600	9,242	15.6
N. Pacific	9,441	10,492	1,051	12.0
Pierce	586,203	700,820	114,617	19.6
Thurston	161,238	207,355	46,117	28.6
Total	**880,415**	**1,054,461**	**174,046**	**19.8**

Note: N. Pacific population = .5x

Source: *2000 Census*, Office of Financial Management, State of Washington.

The varied topography of the region ranges from an extensive coastal area (Pacific Ocean and South Puget Sound) to Mt. Rainier at an elevation of 14,410 feet. It is bordered on the east by the Cascade Mountains and extends west to the Pacific Ocean. Mostly forested and largely mountainous or hilly, the region also includes some centrally located prairie land. There are also a number of islands and deep harbors along the shorelines and numerous lakes and rivers. The extensive bridge and ferry system required to connect these areas to the mainland, and the barriers made by the mountains and rivers, greatly affect the flow of transportation and, thus, the delivery of EMS.

Underrepresented in the population statistics is a very active tourist industry. Mt. Rainier on the eastern edge of the region attracts many visitors. Mayfield Lake in southeast Lewis County has been called "the number one Recreation Lake in the Pacific Northwest." Forested and mountainous areas are attractive to hikers. There are boat races, hunting, county fairs, and other activities throughout the region that significantly increase the population of these areas temporarily. Outdoor activities such as hiking, swimming, boating, clam digging and driving on the ocean beaches increase the incidence of injury, over exertion, and cardiac arrest, putting a strain on rural EMS systems which are fortunate if adequate EMS coverage can be provided to residents. These more rural areas are also attractive to retirees, especially in Lewis, Grays Harbor, and Thurston Counties.

Based on 2000 census, 18% of the state's population is in the West Region. Population growth patterns tend to run in the same direction as the I-5 corridor. West Region contains 19,138 miles of road (see Table 16). As the only major north/south route in the region, and the only route connecting major population centers, this artery carries a tremendous volume of traffic. Other major thoroughfares in Grays Harbor and N. Pacific Counties are Highway 12, a major east/west highway which traverses the width of Lewis and Grays Harbor Counties; and US 101 that runs east/west from Olympia, and north from Aberdeen north to the edge of the region along with US 105 and US 109 (which are often threatened to be washed out). All are relatively rural but well-traveled routes attractive to tourism and having limited EMS coverage. Pierce County has several small thoroughfares including US 512 and US 16, both east/west routes that are highly traveled. Alternate north/south routes through Pierce County are Highways 167, 7, and 507. Upon completion of the new highway that uses 176th, there will be an alternate east/west road connecting with I-5. Highway 16 connects Pierce County with the Olympic Peninsula via the Tacoma Narrows Bridge.

Based on 1998 population, West Region had 748,368 licensed drivers that traveled over 9.2 billion vehicle miles. Licensed vehicles totaled 934,597. (Source: *1998 Fatal Traffic Collisions in Washington State*, Washington Traffic Safety Commission, March 2001). Road types by county are detailed in Table 16. Rural roads comprise 63% of total miles in the region, and all counties except Pierce have primarily rural road conditions. This can affect the provision of EMS services in terms of difficult travel conditions due to weather, road maintenance or topography. This in turn affects prehospital service delivery through variables such as safe travel speed for the response vehicle, ability to locate the scene and ability to access the scene.

Table 21: Total Miles by County and Type of Road, 1999

Type of Road	West Region		Grays Harbor		Lewis		Pacific		Pierce		Thurston	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
State	822	197	185	34	219	22	164	0	173	119	81	22
County	3329	1166	553	19	950	108	349	0	700	806	777	233
City	439	2118	203	141	56	132	59	0	60	1479	61	366
Other	1441	57	448	0	303	0	167	0	523	11	0	46
Subtotal	6031	3538	1389	194	1528	262	739	0	1456	2415	919	667
Total miles	**9569**		**1583**		**1790**		**739**		**3871**		**1586**	

*Other includes Federal miles, state parks, etc.
Source: Washington State Department of Transportation, June 2001.

West Region contains 378 contaminated sites in various stages of clean up. In addition, there are 45 toxic release sites, and 3,415 registered sites for emergency and hazardous chemical storage. (See Table 17) Toxic sites pose an increasing possibility of widespread exposure and require special response skills or teams for a spill, explosion or leak. Responses must be coordinated with multiple agencies as opposed to one. In addition, the status of sites is ever changing. To receive accurate data at any given time, questions should be directed to the Department of Ecology, Southwest Regional Office in Olympia.

Table 22: Summary of Toxic Sites in the West Region

Type of Site	Grays Harbor	Lewis	Pacific	Pierce	Thurston	Total
Contaminated	45	37	13	228	55	**378**
Toxic release	5	5	0	30	5	**45**
Emergency & hazardous chemical storage	62	59	20	3208	66	**3415**
Total sites	**112**	**101**	**33**	**3466**	**126**	**3838**

Source: Washington State Department of Ecology, June 2001.

4. **Goals:** Identify the Regional EMS/TC system's long-term and short-term goals, objectives, strategies and projected costs to improve the overall Prehospital EMS and Trauma Services in the region.

GOAL
Maintain and enhance regional hospital and prehospital trauma care response system.

Objective One: Maintain dialogue between local providers of regional care.
Strategies:
1) Assist local county EMS councils to accomplish GIS mapping of response areas and to obtain ready access to response time data from dispatch centers.
2) Assist with education of local providers about how establishing prehospital response areas and minimum/maximum numbers of services affects the healthy functioning of the EMS and trauma care system.

Objective Two: Maintain quality improvement activities that are external to local systems, i.e. regional.
Strategies
1) Encourage prehospital participation in all West Region Quality Improvement meetings.
2) Offer a workshop session for a combined audience of ALS providers, nurses and physicians at the annual West Region EMS Conference.
3) A long-term strategy is sponsorship of NHTSA's 2-day course; "A Leadership Guide to Quality Improvement for Emergency Medical Services Systems." This training could further develop a common vocabulary for quality improvement discussions among prehospital providers, Medical Program Directors and emergency department nurses and physicians. Cost is estimated at $5,000.

Objective Three: Assist provider agencies in obtaining funding and other resources needed to provide trauma services and reduce or prevent trauma fatalities.
Strategy
1) Sponsor regional workshops, one per county, to assist agencies in understanding and completing the Department of Health application for a Prehospital Needs Grant. Cost is estimated at $200.
2) Strive to attain the goals outlined for the EMS community in *Target Zero*, a multi-agency effort to reduce traffic fatalities in Washington State to zero by the year 2030.

5. **Using the attached Table B**., For each county, specify in the appropriate columns
   a. If "no changes" have been made
   b. Current number of DOH-approved verified prehospital services, by county.
   c. Current DOH approved minimum number and any recommended changes.
   d. Current DOH approved maximum number and any recommended changes.

Table B.
VERIFICATION

WEST REGION: GRAYS HARBOR COUNTY

JUNE 2001

Min/Max Numbers for trauma-verified prehospital services

Instructions.

a. List the current DOH-approved number of prehospital verified services within the region by county.
b. Using the information identified in the narrative above regarding the need and distribution process for each county, specify the regionally- recommended minimum/maximum number of prehospital verified services within the region, by county.
c. List the current number of services verified at each level, as identified in the need and distribution section.
d. Submit a completed Table B for each county

Note: Only a number or a zero may be entered as a recommendation in each of the blanks below, and each blank must contain either a number or a zero.)

SERVICES	Check if No Change	CURRENT Number Verified	MINIMUM NUMBER Approved	Recommended	MAXIMUM NUMBER Approved	Recommended
Aid -BLS		11	9	9	12	14
Aid - ILS		0	0	3	0	4
Aid - ALS	✓	0	0	0	0	0
Amb - BLS	✓	3	4	4	6	6
Amb - ILS	✓	1	3	3	6	6
Amb - ALS	✓	5	6	6	6	6

NOTE: Include a narrative discussion explaining the region's rationale or justification for recommended changes in the current DOH-approved minimum and maximum numbers.

Table B.
VERIFICATION

WEST REGION: LEWIS COUNTY

JUNE 2001

Min/Max Numbers for trauma-verified prehospital services

Instructions.

a. List the current DOH-approved number of prehospital verified services within the region by county.
b. Using the information identified in the narrative above regarding the need and distribution process for each county, specify the regionally- recommended minimum/maximum number of prehospital verified services within the region, by county.
c. List the current number of services verified at each level, as identified in the need and distribution section.
d. Submit a completed Table B for each county

Note: Only a number or a zero may be entered as a recommendation in each of the blanks below, and each blank must contain either a number or a zero.)

SERVICES	Check if No Change	CURRENT Number Verified	MINIMUM NUMBER Approved	Recommended	MAXIMUM NUMBER Approved	Recommended
Aid -BLS	✓	2	8	8	21	21
Aid - ILS	✓	0	0	0	2	2
Aid - ALS	✓	0	0	0	2	2
Amb - BLS	✓	10	11	11	21	21
Amb - ILS	✓	1	1	1	6	6
Amb - ALS	✓	2	1	1	6	6

NOTE: Include a narrative discussion explaining the region's rationale or justification for recommended changes in the current DOH-approved minimum and maximum numbers.

Table B.
VERIFICATION

WEST REGION: NORTH PACIFIC COUNTY

JUNE 2001

Min/Max Numbers for trauma-verified prehospital services

Instructions.

a. List the current DOH-approved number of prehospital verified services within the region by county.
b. Using the information identified in the narrative above regarding the need and distribution process for each county, specify the regionally- recommended minimum/maximum number of prehospital verified services within the region, by county.
c. List the current number of services verified at each level, as identified in the need and distribution section.
d. Submit a completed Table B for each county

Note: Only a number or a zero may be entered as a recommendation in each of the blanks below, and each blank must contain either a number or a zero.)

SERVICES	Check if No Change	CURRENT Number Verified	MINIMUM NUMBER Approved	Recommended	MAXIMUM NUMBER Approved	Recommended
Aid -BLS	✓	1	3	3	4	4
Aid - ILS		0	0	2	0	4
Aid - ALS	✓	0	0	0	0	0
Amb - BLS	✓	0	0	0	0	0
Amb - ILS		0	0	0	0	1
Amb - ALS	✓	0	1	1	1	1

NOTE: Include a narrative discussion explaining the region's rationale or justification for recommended changes in the current DOH-approved minimum and maximum numbers.

Table B.
VERIFICATION

WEST REGION: PIERCE COUNTY

JUNE 2001

Min/Max Numbers for trauma-verified prehospital services

Instructions.

a. List the current DOH-approved number of prehospital verified services within the region by county.
b. Using the information identified in the narrative above regarding the need and distribution process for each county, specify the regionally- recommended minimum/maximum number of prehospital verified services within the region, by county.
c. List the current number of services verified at each level, as identified in the need and distribution section.
d. Submit a completed Table B for each county

Note: Only a number or a zero may be entered as a recommendation in each of the blanks below, and each blank must contain either a number or a zero.)

SERVICES	Check if No Change	CURRENT Number Verified	MINIMUM NUMBER Approved	Recommended	MAXIMUM NUMBER Approved	Recommended
Aid -BLS	✓	16	24	24	49	49
Aid - ILS	✓	0	0	0	0	0
Aid - ALS	✓	0	1	1	10	10
Amb - BLS	✓	7	2	2	20	20
Amb - ILS	✓	0	0	0	0	0
Amb - ALS	✓	13	12	12	24	24

NOTE: Include a narrative discussion explaining the region's rationale or justification for recommended changes in the current DOH-approved minimum and maximum numbers.

Table B.
VERIFICATION

WEST REGION: THURSTON COUNTY

JUNE 2001

Min/Max Numbers for trauma-verified prehospital services

Instructions.

a. List the current DOH-approved number of prehospital verified services within the region by county.
b. Using the information identified in the narrative above regarding the need and distribution process for each county, specify the regionally- recommended minimum/maximum number of prehospital verified services within the region, by county.
c. List the current number of services verified at each level, as identified in the need and distribution section.
d. Submit a completed Table B for each county

Note: Only a number or a zero may be entered as a recommendation in each of the blanks below, and each blank must contain either a number or a zero.)

SERVICES	Check if No Change	CURRENT Number Verified	MINIMUM NUMBER Approved	Recommended	MAXIMUM NUMBER Approved	Recommended
Aid -BLS	✓	9	8	8	8	8
Aid - ILS	✓	0	0	0	1	1
Aid - ALS	✓	0	0	0	1	1
Amb - BLS	✓	6	7	7	9	9
Amb - ILS		0	0	0	0	1
Amb - ALS		5	5	1	5	4

NOTE: Include a narrative discussion explaining the region's rationale or justification for recommended changes in the current DOH-approved minimum and maximum numbers.

E. Patient Care Procedures (PCPs) and County Operating Procedures (COPs):

1. **Current Status: Describe** the current status of regional PCPs and COPs:

   Prehospital patient care procedures (PCPs) are defined in writing and standardized for the entire region in the West Region EMS and Trauma Care System Operational Guidelines (see Appendix One). Annual review of these regional PCPs is the responsibility of the MPDs and the Planning and Standards Committees, and subsequently DOH. Individual provider agencies in the region receive updates of the PCPs. County operating procedures must at least meet the minimal regional standard, and if they exceed the standard they must be reviewed by the Council and approved by DOH before implementation. To date, all West Region counties adhere to the regional PCPs. In addition, Pierce County has a state-approved COP that describes use of the state trauma triage tool in the county.

   As above, the MPD-approved patient care protocols are on file in each county. These protocols are reviewed regularly by the MPD and county EMS Council to verify they meet each community's medical needs and the state medical standards. Refer to Patient Care Procedure #12: Prehospital Care—Patient Care Protocols.

2. **Strengths and Weaknesses: Discuss** the strengths and weaknesses of the current system to include an assessment of additional needs within the region.

   The regional PCPs are working well. We continue to educate providers about the definition and role of regional patient care procedures, county operating procedures and county protocols.

3. **Demographics:** Identify specific demographics of the region that drive Patient Care Procedure development in the region.

   Refer to pages 37-39 for demographics and geography that affect the development of PCPs. In addition, the variance in available resources from county to county requires the development of protocols and inter-local agreements for provision of care.

4. **Goals:** List the Regional EMS/TC system's goals, objectives, strategies and projected costs to develop and/or improve the regional PCPs or county COPs.

   GOAL
   Provide an ongoing forum for discussion and refinement of regional patient care procedures and county operating procedures to support the provision of optimal care to the trauma patient through effective functioning of the EMS and trauma care system.

   OBJECTIVES
   Provide review of the regional PCPs on an annual basis, or more often if needed. Review COPs developed by local counties, as needed.
   Strategy
   - Review PCPs and separate the actual patient care procedures to which verified prehospital services will be held versus the policies or standards the region has adopted. Accomplish by June 2002.

F. Multi county or county/inter-regional Prehospital Care: Discuss the development of inter-regional prehospital patient care procedures that address issues which cross regional and/or county boundaries, if any, including the current status of any inter-regional patient care procedures or inter-local agreements for provision of care.

The West Region has no inter-regional patient care procedures at this point. Patient flow patterns relative to trauma determine where the patient will be received based on the severity of injuries and special needs. West Region QI Forum has discussed the need to initiate discussion among counties and surrounding regions about differences in-patient care protocols for head injuries of adults and children.

V. DESIGNATED TRAUMA CARE SERVICES

1. Current Status:

a List the currently designated trauma services (general and pediatric) and trauma rehabilitation services in the region.

West Region Healthcare Facilities	City	Designation Level
GRAYS HARBOR COUNTY		
Grays Harbor Community Hospital	Aberdeen	Level III
Mark Reed Hospital	McCleary	Level V
LEWIS COUNTY		
Providence Centralia Hospital	Centralia	Level IV Level II-R
Lewis County Hospital District #1	Morton	Level IV
NORTH PACIFIC COUNTY		
Willapa Harbor Hospital	South Bend	Level IV
Madigan Army Medical Center	Ft. Lewis	Recognized as Level II though not officially designated
Mary Bridge Children's Hospital	Tacoma	Level P-II (regional)
Tacoma General Hospital	Tacoma	Level II joint designation with St. Joseph Hospital
St. Clare Hospital	Lakewood	Level IV
St. Joseph Hospital	Tacoma	Level II joint designation with Tacoma General Hospital Level II-R
THURSTON COUNTY		
Capital Medical Center	Olympia	Level IV
Providence St. Peter Hospital	Olympia	Level III Level II-R
PIERCE COUNTY		
Allenmore Medical Center	Tacoma	
Good Samaritan Hospital	Puyallup	Level III Level I-R Level I-RP

Note: R = Trauma Rehabilitation Care P = Pediatric

b. Describe facility resources in regard to trauma specialty needs such as pediatric trauma, burn care, traumatic brain injury, spinal cord injury, multi-system injuries, surgical, imaging, critical care procedures, and trauma rehabilitation for pediatric, burn, TBI, spinal cord injury, and orthopedic injuries.

Patients are stabilized and treated in the region's trauma centers. Patients requiring specialty care for pediatrics or for injuries such as acute burns, spinal cord injuries, and limb re-plantation will be transferred; when appropriate, after initial resuscitation as per individual written transfer agreements. Mary Bridge Children's Hospital is a designated Level II pediatric trauma center located in Tacoma and serving Southwest Washington. They offer highly trained resuscitation and emergency teams, and pediatric emergency and intensive care doctors who provide advanced trauma capabilities suited to the special emotional and physical needs of children and their families.

Typical traumatic injuries requiring rehabilitation services include burns, amputations, peripheral nerve injuries, musculoskeletal injuries including multiple fractures, crushing or severe soft tissue injuries and severe hand injuries. Good Samaritan, St. Joseph and Providence St. Peter are equipped to handle most of the head and spinal cord injuries commonly associated with major trauma. Providence Centralia is equipped to handle these types of injuries on a selective outpatient basis.

c. Discuss any unfilled need for trauma services (general and pediatric) and trauma rehabilitation services in the region, and regional plans to meet these needs.

Current levels of designation are meeting regional needs. The Council will request the West Region QI Forum to review the methodology for establishing trauma patient volumes and designation levels, using the 2000 census and other current data.

There is currently a lack of trained personnel in the prehospital and hospital arena in the West Region. The smaller number of healthcare providers in the area sometimes stresses the system by placing too great a demand on those in practice. Reimbursement levels are affected by economics as well. The main problem is how to entice newly trained personnel to an economically depressed area, in particular Grays Harbor, Lewis and N. Pacific Counties. Unemployed and economically disadvantaged populations may lack health insurance and are less able to pay for healthcare out-of-pocket. This can result in seeking more expensive medical assistance in the emergency department, rather than investing in preventive medicine. The Employment Security Department classifies "distressed areas" as having unemployment rates greater than or equal to 6.4%. The three-year average unemployment rate (January 1997-December 1999) for Grays Harbor was 9.2%; Lewis, 8.3%; and Pacific, 9.1%. (Source: *Labor Market and Economic Analysis*, Washington State Employment Security Department)

Potential personnel need to be informed of the strengths within our region. The hospital and prehospital setting in the region provides "small town" atmosphere. The lack of "things to do" seems to be a major deterrent for professional families. We live at a slower pace than the large metropolitan areas. In most cases, property ownership is easily available for average family life styles. Rental of houses and apartments is available and reasonably priced. The allure of being able to travel from the ocean to the mountains in less than four hours, and the availability of numerous outdoor activities, i.e. hiking, water sports, hunting, fishing and major sporting events, makes this area a desirable place to live.

d. Identify training needs for Trauma Service and Trauma Rehabilitation Service Personnel:
   1) Include a narrative description of the trauma care workforce resources in the region including needs for additional nurses, physicians, or other providers and planned solutions.
   2) Describe training resources currently available for trauma service personnel.
   3) Discuss remaining training needs for trauma care personnel to maintain existing level of personnel, and any planned increase in trauma care personnel within the region.

There is a shortage of emergency room, ICU and critical care nurses in the West Region. A group of hospitals in the West Region has formed the Emergency Nursing Education Cooperative. They developed a program to train nurses interesting in entering clinical practice in the emergency room. Cooperative members present 80 hours of didactic instruction, and students also receive certifications in PALS-equivalent, ENPC and TNCC. The program is very cost effective for the cooperative members.

The West Region sponsors courses to help facilities meet designation requirements in WAC for education of trauma and ICU nurses. We offer 10-15 courses throughout the year in various locations.

TABLE 23: Licensed* Hospital Personnel in the West Region

COUNTY	PHYSICIAN COUNT	NURSE COUNT**
Grays Harbor	65	629
Lewis	72	687
Pacific (as a whole)	16	141
Pierce	1,277	8,063
Thurston	492	2,535
TOTALS	**1,922**	**12,055**

*Licensed personnel – not necessarily employed in licensed profession.
**Includes RNs and LPNs
Source: Dept. of Health, Office of Health Professions Quality Assurance, 2001.

2. Demographics:
Identify specific demographics of the region that are likely to require additional designated trauma services or trauma rehabilitation services including total population of region, seasonal changes, licensed drivers, licensed vehicles, miles of roads, road or traffic conditions, current or anticipated industry.

Refer to the discussion of demographics on pages 32-33 and 37-39. The same factors effect the entire EMS and trauma care delivery system.

3. Designated general, pediatric and rehabilitation trauma facilities: Regional review of recommended minimum and maximum numbers of designated trauma facilities within the region.

a. Describe the methods used by the region to establish or re-establish the recommended minimum and maximum numbers and levels and distribution of designated trauma and trauma rehabilitation services needed in the region.

The original Council recommendations for trauma center designation were based on onsite visits, hospital interest and ability, trauma patient transfer, 1990 census information, and geographic location. Trauma patient volume was projected to be two cases per 1000 population per year. This was based on the Arthur Anderson cost reimbursement study (which is based on CHARS data), the West Region Hospital Trauma Survey and actual trauma discharges, with an adjustment for "first day" deaths and transfers out of region.
The plan groups trauma patients for 1) minor, moderate, and severe/critical injury; and 2) adult (≥16 years) and pediatric. An adult Step 1–Step 2 patient will usually go to a Level I or II unless those are more than 30 minutes away, in which case the patient will go to the closest level III or IV (in that order) if one is within 30 minutes. Any Step 1–Step 2 trauma patient will be a candidate for helicopter pickup. The planning method used for recommending trauma centers is presented in greater detail in the West Region Hospital Trauma Study (available on request from the West Region office).

The Tacoma Trauma Service started up in June 2000. The original patient volume projections were 500-700 patients per year. This projection has been revised to 1200-1500 patients by the end of their first year of operation. Total trauma divert time has been less than 2% of the total time in operation. Community specialists have been called in to consult with trauma surgeons on about 50% of patients. This has often allowed them to retain care of patients locally. More specific details are available in the Adult Trauma System Report:
http://www.co.pierce.wa.us/abtus/ourorg/dem/EMS/TraumaStatRpt.htm

b. Specify the region's recommendations for minimum and maximum numbers and levels of designated trauma and trauma rehabilitation services using Table C. Justify changes from previous recommendations based on identified need and distribution.

The recommendations for the FY02-03 plan are based on trauma patient data from the Trauma Registry, CHARS, Center for Vital Statistics, prehospital agencies and designated facilities. Table C should be used with the following recommendations for trauma centers by geographic location and level of care.

The West Region trauma plan is designed to be inclusive in the rural areas and exclusive in the more populated urban areas. This approach is safe from a patient care standpoint and cost–effective in minimizing unnecessary duplication of services. For this reason, all rural centers are currently in the plan. In the metropolitan areas of Tacoma and Olympia, the Level IVs and non-designated hospitals will assist in system coordination, serve as backup in times of disaster and mass casualty incidents (MCIs), and participate in education and quality improvement within the system.

Designated trauma center representatives provide leadership for the West Region Quality Improvement Forum per WAC 246-976-910. The majority of healthcare services in the West Region participate in the QI Forum. Monitoring trauma centers falls within the purview of DOH.

TRAUMA CENTER LOCATION	TRAUMA CENTER LEVEL RECOMMENDATIONS
Regional (Pierce County)	1 Level II - Pediatric
Pierce County: Due to geographical diversity & district population centers in Pierce County, WREMS recommends the distribution of Level II and III trauma centers throughout the county to include the west side, east side and south side of the county.	1 Adult Level II – Civilian 1 Adult Level II – Military 2 Adult Level III or IV
Thurston County	1 Level II or III AND 1 Level IV
Lewis County	2 Level III or IV
Grays Harbor County	1 Level III or IV 1 Level IV or V
Northern Pacific County	1 Level IV

Table C
DESIGNATION
WEST REGION: JUNE 2001

Min/Max Numbers for **Acute** Trauma Services

LEVEL	Check if No Change	CURRENT Number Designated	MINIMUM NUMBER* Approved	Recommended	MAXIMUM NUMBER* Approved	Recommended
II	X	2 (1 joint)	2	2	3	3
III	X	3	1	1	6	6
IV	X	5	2	2	8	8
V	X	1	1	1	1	1
IIP	X	1	1	1	1	1
IIIP	X	0	0	0	0	0

***** Geographic location and recommended serial designation options for acute care trauma services to be specified within the FY02– 03 plan per chart on page 2.

Min/Max Numbers for **Rehabilitation** Trauma Services

LEVEL	Check if No Change	CURRENT Number Designated	MINIMUM NUMBER Approved	Recommended	MAXIMUM NUMBER Approved	Recommended
I - Adult	X	1	1	1	1	1
II – Adult	X	2	3	3	4	4
I – Ped	X	1	1	1	1	1

NOTE: Include a narrative discussion explaining the region's rationale or justification for recommended changes.

VI. DATA COLLECTION AND SUBMISSION

A. Data: Discuss the role the Regional EMS/TC system may have in:

1. The transition of prehospital to hospital submission of prehospital trauma data

   All of the designated trauma facilities are providing data to the registry, with nearly 100% reporting for 1999-2000. Prehospital participation has gradually increased each year.

TABLE 24: Trauma Registry Participation in the West Region, 1997-2000

	EMS				Hospitals			
	1997	**1998**	**1999**	**2000**	**1997**	**1998**	**1999**	**2000**
Total Records Submitted *(includes EMS database)*	1914	2016	1564	7451	781	656	854	2199
Records Submitted Inclusion Criteria	317	1054	629	1079	726	578	624	1925
Trauma Services Verified or Designated	67	88	86	89	8	8	8	13
Agencies / Facilities Submitting Data	8	28	22	35	7	7	8	12

Total Records Submitted numbers include any records that were submitted from any agency. The EMS records include records submitted for the full EMS database as well as records for the Washington Trauma Registry.

Records Submitted Inclusion Criteria for major trauma represents the total records meeting inclusion criteria referred to in WAC.

Trauma Services Verified or Designated represents the EMS verification and healthcare facility designation process throughout the years indicated.

Agencies / Facilities Submitting Data shows how many agencies and facilities have contributed data to the Washington Trauma Registry and / or EMS database.

2. Assisting with improving the quality of prehospital trauma data collection through completion and submission of trauma patient run sheets to designated trauma services. (An example might be improving the method of getting dispatch times from communications centers.)

   The Council will encourage discussion among providers to share what works and problem solve as we make the transition to hospital entry of prehospital data into the Trauma Registry. Trauma Coordinators from designated facilities and prehospital representatives will formulate the discussion of prehospital trauma data collection issues through the confidential meetings of the West Region Quality Improvement Forum. The Forum will make recommendations to the Council regarding how we can best assist prehospital or hospital agencies encountering difficulties with the new system, when a need comes to light.

VII. EMS AND TRAUMA SYSTEM EVALUATION (Including both prehospital and hospital components):

A. Effectiveness and Quality Assurance

1. Describe the Regional EMS/TC system's role in the EMS and trauma system quality assurance including support of trauma registry data collection and submission. Include discussion of provider-specific QA activities within the region. Identify any issues that limit effectiveness of QA within the region.

   The West Region Quality Forum was reorganized in 1996. With the trauma designation of eight hospitals in the region, it was possible to reorganize as the West Region QI Forum under the leadership of designated facilities. This effort is in compliance with their responsibility for regional quality assurance as defined in WAC 246-976-910. The regional quality assurance plan was approved by DOH in May 1997 and revised in March 2001. Five meetings are held each year:

   - Level I-II (September)
   - Level III (November)
   - Levels IV-V & Non designated facilities (January)
   - Prehospital (March)
   - Prevention/Rehabilitation (May)

   Responsibility for the internal quality assurance/quality improvement presentation, individual case presentations, and education will rotate among the designated trauma facilities and prehospital agencies. The overall agenda will be inclusive of the full continuum of care. The State Trauma Registry data will enhance the efforts to improve trauma patient care. West Region representation to the forum includes the Council Chair and committee chairs. The region also provides office support and some funding.

   Perhaps three of the biggest issues that continue to limit the effectiveness of QA within the region involve data, member participation and lack of stable funding. The lack of data from a majority of prehospital providers is being discussed with DOH to determine the best way to encourage participation. Without accurate data, the region cannot identify specific areas of concern. The Council will promote and sponsor trainings in Collector. Increased participation by physicians and prehospital representatives is desired and needed. An ALS/RN/MD education track is planned for the 2002 West Region EMS Conference.

Submitted by: Signature on file ***Date: Revised January 22, 2002***